

Reconceptualising Disasters: Lessons from the Samoan Experience

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Glossary of Samoan Terms

A'ai	Central village area
Aiga	Extended family/kin group
Ali'i	High chiefs and talking chiefs of the village
Alofa	Love, kindness, compassion
Aualuma	Village girl's organisation
Aumaga	Village organisation of untitled men
Fa'a matai	Chiefly system
Fa'a Samoa	Samoan customs/Samoan way of life
Fa'a'aloalo	Respect
Fa'alavelave	Elaborate social events (e.g. weddings, funerals, title bestowals) which involve exchanges of gifts, money etc.
Fale	House, often implying structure of traditional materials
Fale palagi	A European styled house, usually made of concrete block with enclosed walls, glass windows and a tin roof
Feagaiga	A sacred pact between a brother and a sister
Fealofani	Goodwill
Fono	Village council of matai
Gaioioi	To travel/move
Ie sae	Fine mat
Loto maualolo	Humility
Māma	Clean
Māmā	Light
Mamafa	Heavy
Maota	Royal meeting or guesthouse
Matai	Title-holder, chief chosen by members of aiga
Mea alofa	Gifts, food, resources, money, funding presented as a sign of appreciation and gratitude
Momolo	To assist/to express solidarity
Nofonofo	To stay put
Palagi	European, white man/woman
Palapala	Dirty
Pule	Authority, power
Pulenu'u	Mayor
Saka	Boiled food
Ta'a'mu	Samoan yam
Tala	Samoan dollar
Tamaitai	Village women
Taupou	A title of office bestowed by high ranking ali'i upon an adolescent female member (virgin) of his aiga
Tautua	Service to a matai
To'ona'i	The meal on Sunday after church
Umu	Samoan earth oven, used for cooking
Umukuka	Cooking house

Abstract

In the early nineties Samoa was hit by two major cyclones, Cyclone Ofa (1990) and Cyclone Val (1991), which caused significant damage and devastation. Although it is more than 15 years since these cyclones, they still factor in people's lives and have impacted on the way individuals and organisations conceptualise disasters in Samoa.

The incidence of disasters is increasing globally and Pacific Island nations face ongoing and increasing vulnerability to the impacts of such disasters at both community and national levels. Disasters can result in short and long-term social, economic and environmental consequences and, as Ofa and Val illustrate, entire community survival and livelihood systems can be severely disrupted by a single disaster. As a consequence, disasters continue to pose significant threats to sustainable development in the Pacific region.

Villagers from the eastern coast of Savai'i, and Government and NGO agencies in Apia were interviewed during six weeks of fieldwork in Samoa. These interviews and insights gained from participant observation, as well as secondary materials such as maps and official reports are used to explore the ways in which people make sense of disaster and hazard risk in their daily lives and the ways in which their belief-systems (cultural, religious etc.) result in very different understandings of disasters and disaster risk.

Building on a growing body of critical disaster literature, this thesis explores the ways in which disasters are more than 'natural' events. It examines the ways in which they are socially constructed, resulting from human actions, rather than 'freak natural events'. This approach challenges dominant understandings of disasters which often underpin disaster planning at both national and regional level, and are often characterised by technical 'fixes'. In contrast, this thesis argues for more locally appropriate understandings of 'disasters' and for the importance of placing disaster events within the context of people's everyday lives and broader development priorities.

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Chapter One: Disasters and Development in Samoa: Setting the Scene

“...they left the morning at 6 o’clock when Ofa hit, and they were standing up in the cliffs surrounding, you see Papa is a village on the shore, and then they have these rock cliff up there surrounding them in a semi-circle and they were up there all the families, they were looking down, for the whole day as like the water just bombed the place and flooded the place and they were looking down at their houses just breaking down and being carried out to sea and sand was pushed in and the church building was down, everything was destroyed” (Tufi)

Disaster and development theory and practice are closely linked, although this is often overlooked both in practical terms and within the literature. Linking development processes to disaster events ensures that events are understood and made sense of in terms of the broader context of processes taking place within a region. In many cases, disaster events can be viewed as symptomatic of development failures by, for example increasing people’s vulnerability to hazards through environmental degradation.

Many of the recent critiques of development, including its technocratic approach to solutions and managerial nature, are also salient within the field of disaster management and this thesis will explore some of these critiques. However, just as critiques of development theory have led to alternative approaches, it is also possible for these lessons and new approaches to be applied to aspects of disaster management. Alternative development argues for the inclusion and empowerment of local people in terms of development direction and decisions so that approaches are relevant. This approach is highly transferable to disaster management approaches. Similarly, many of the vulnerability reduction projects undertaken within the field of development are also beneficial in terms of reducing people’s vulnerability in a disaster event. This thesis illustrates the ways in which it is very difficult to remove disasters from the broader development context both in terms of vulnerability reduction and post-disaster recovery.

Although there is an emerging literature on disasters and development, there appears to be very little research within the Pacific region. This thesis focuses specifically on Samoa, an island nation of 176,710 people in the eastern Pacific. By exploring similarities and differences between the international disaster and development literature and my research in Samoa, this thesis illustrates the ways in which disaster experiences are context dependent. Therefore, disaster experiences for people in Samoa, and possibly within the Pacific region, at times differ from dominant understandings of disaster experiences in the international literature. There is a danger that without understanding the ways in which the Pacific context differs, blueprints from other regions of the world will be applied on the region. It cannot be emphasised enough just how important local context is in terms of understanding hazard risk and disaster events.

Research Aims

This research project challenges the notion that disasters are ‘natural’ events. Building on a growing body of critical disaster and development literature, this thesis explores the ways in which disasters are more than ‘natural’ events and explores the ways in which disasters can be seen as ‘socially constructed’ events. This thesis also explores the linkages between disasters and development and argues for a movement away from event-centred understandings of disasters. Disaster and development theory and practice are closely linked, although this is often overlooked both in practical terms and within the literature.

This thesis aims to explore the relationship between disasters and development in Samoa and is based on qualitative fieldwork undertaken in Samoa in late 2006. I spent four weeks in Sapapali’i village, Savai’i, conducting interviews with men and women from the village and undertaking participant observation. Interviews were also conducted with government agencies and NGOs in Apia. Research data also includes secondary material such as historical records and published research on disasters and development in Samoa.

The research is based around four key aims:

- To explore the relationship between disasters and development
- To explore local environmental and hazard management in Samoa
- To understand the ways in which people experience and make sense of disaster risk and disaster events in Samoa
- To explore the ways in which Samoan understandings of disasters are similar/differ from, the broader disaster literature/theory

Exploring hazards within the broader context of people's everyday lives challenges dominant understandings of disasters which often underpin disaster planning at both national and regional level, and are often characterised by technical 'fixes' and event-centred approaches. In contrast, this thesis argues for more locally appropriate understandings of 'disasters' and places such events within the context of people's everyday lives and broader development priorities.

Fieldsite in Context

Sapapali'i

Sapapali'i village is ten minutes drive north of Salelologa (the main town on Savai'i, and location of the wharf for ferries crossing between Upolu and Savai'i). Sapapali'i is on the eastern side of Savai'i and located on the coast (see figure 1.1). The village is intersected by two major rivers which regularly flood after heavy rainfall. Most houses are located on the coast with family plantations stretching inland away from the main road. Most families have a number of buildings on their land including open fale, a cooking house, and a *fale palagi*¹. Surrounding their houses are small gardens which contain fruit and vegetables and plants for weaving and medicinal use (see figure 1.2 for an aerial photo of the village). Most families also have chickens and pigs. A decision made by the pastor

¹ A European-styled house, usually made of concrete block with enclosed walls, glass windows and a tin roof.

after his arrival in Sapapali'i means that pigs must be enclosed in pens (as opposed to other villages where they are allowed to freely roam).

Sapapali'i is divided into four sub-villages: Sapapali'i, Faiga, Vaitolo and Sa Malietoa. Each sub village has its own fono which meets to discuss minor issues that arise within it. When there are more serious matters to discuss or large events to plan the four sub-villages meet together.

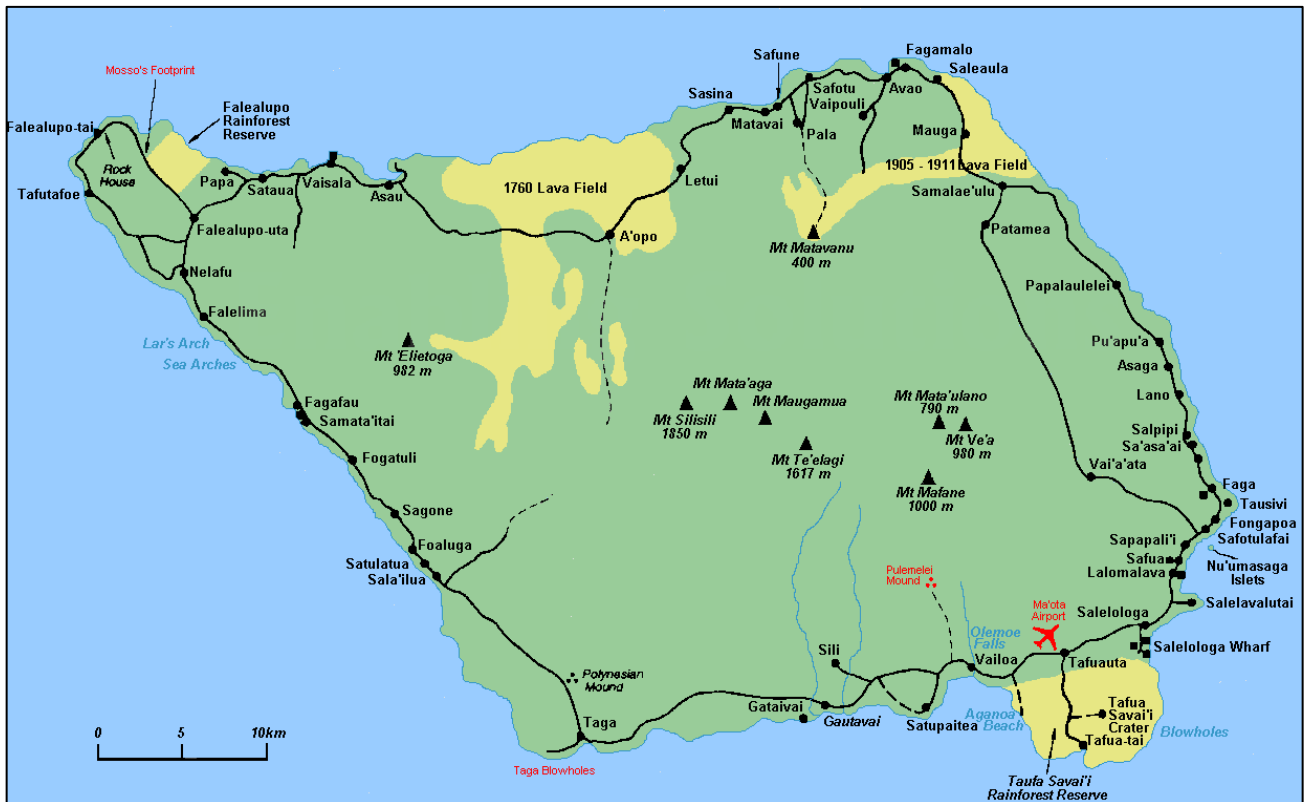


Figure 1.1: Map of Savai'i showing location of Sapapali'i (Sapapali'i is located in the south-east corner of the map, half-way between Salelologa and Faga) (Source: <http://www.samoa.co.uk/Maps/savaii-map.html>)

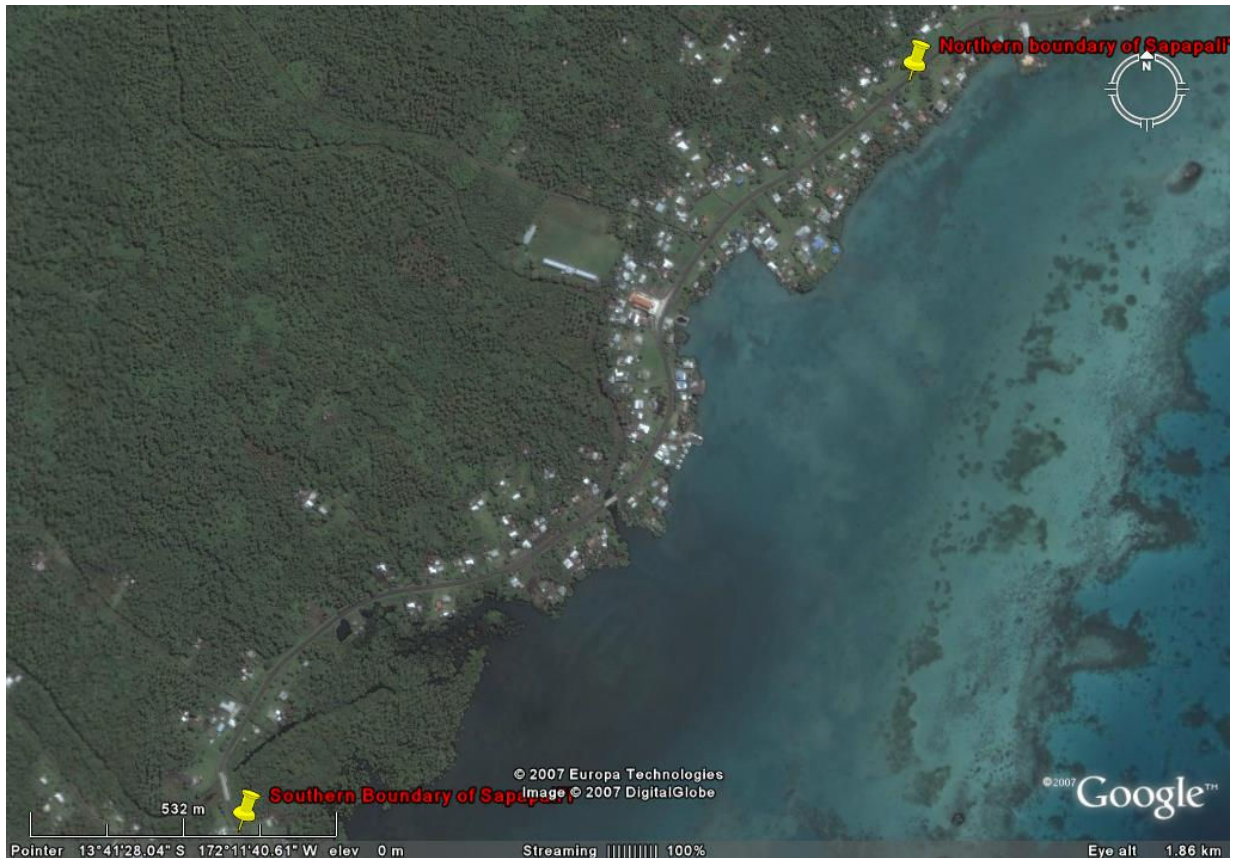


Figure 1.2: Sapapali'i Village (Source: googleearth.com)

Sapapali'i is the honorary seat and has been home to the esteemed Malietoa title and its succession of heirs for over four centuries. HRH Malietoa Tanumafili II (1913-2007), was Samoa's Head of State (*O le Ao le Malo*) until his death in May, 2007.

According to the 2004 Samoan census, Sapapali'i has a population of 873 living in the village. This is, however, not a definitive number because of the population mobility in Samoa which means that many people commute to Apia for employment or education during the week, returning to the village for the weekend. Sapapali'i, like many other villages in Samoa loses a large proportion of its youth (13-25 yrs), perhaps 50-60%, to Apia (or overseas) for education or employment.

A distinctive feature of Sapapali'i is the presence of only one church in the village, the Ekalesia Fa'apopotoga Kerisiano o Samoa (EFKS) church² (see figure 1.3). Sapapali'i was the site of the arrival of John Williams and the first Christian missionaries from the London Missionary Society (LMS) in 1830. A monument opposite the church commemorates the site where the missionaries landed. Given the prominence of the village for the EFKS church in Samoa other religious denominations are banned from establishing churches in Sapapali'i. According to the 2004 census, 692 people in Sapapali'i belonged to the EFKS church, and 181 to other denominations (these people travel to churches in neighbouring villages). The presence of only one church has resulted in a very close relationship between the village and the church in terms of village authority, decision making, community activities etc. A common response from participants in my research was that 'the church *is* the village' and this clearly has implications in terms of the relationship between traditional structures such as the village fono and church groups and committees.



Figure 1.3: EFKS Church, Sapapali'i (Source: Watson, 2006)

² The EFKS church is commonly referred to as the Congregational Church of Samoa

The main source of income for families in Sapapali'i is cash earned by selling produce from their plantations, and the majority of adults in the village are involved in semi-subsistence-based agriculture, which is supplemented by fishing and/or by remittances from overseas family members. Most women spend their days undertaking domestic duties such as cooking, washing, cleaning, caring for children. Some, like a number of my participants, meet to weave on certain days of the week. The men spend most of their day working in the plantation, often leaving very early in the morning and returning mid afternoon to go fishing. A smaller proportion of people in the village own businesses, including a village shop or taxi service. Some, usually men, commute to Apia during the week for employment.

There are a number of organisations in Sapapali'i which are central to village life and a sense of community. Historically these groups were part of the traditional village structure and included the village fono, the aumaga (village organisation of untitled men) and the aualuma (village girl's organisation). Today, however, many of these groups have been replaced by groups related to the church. For example, *sa to'a*, the village women's organisation (for women born in Sapapali'i) has been in decline in the village and currently has very low membership. In the past it was involved in activities such as promoting public health and village cleanliness, whereas today it is predominantly only involved in village ceremonies.

In contrast, the *Mafutaga A Tinā* (Church Women's Fellowship) has very strong membership, with most women who attend the EFKS church taking part. This group is the society of church women (wives and mothers) and is led by the pastor's wife. Following the village's conventional laws and order, their works are essential to the running of their families, church and to the village at large. In keeping with both the *Fa'a Samoa* and their Christian faith, the *Mafutaga A Tinā* is, according to Sosefina, the pastor's wife, central to the role of home, stability, and almsgiving in Samoan society. A major fundraiser for *Mufutaga A Tinā*, are the weekly bingo nights held each Tuesday. Buses are sent to collect people from neighbouring villages and it is a focal point for socialising during the week. This money is used for annual donations given to the head

EFKS church in Apia and other donations and items which need to be purchased for the pastors.

Sapapali'i has a primary school which is maintained by the village and a pre-school which was built with funding from an EU micro-project scheme. Another central part of children's lives is the church. On Sundays they attend Sunday school before the morning service and after the evening service. They are also expected to help maintain the pastor's property and spend one afternoon a week doing gardening/cleaning duties.

By undertaking research in Sapapali'i, *local* Samoan disaster experiences, disaster management and development processes can be explored. Sapapali'i is in many ways typical of a rural Samoan village. It faces many of the common problems being faced by rural Samoan regions. These problems include a large out-migration of young adults to Apia or overseas, balancing subsistence production for family needs with the increasing demands for cash in everyday life and a high dependence on remittances from family overseas. In terms of its natural environment, Sapapali'i is located on the coast like most Samoan villages and is bisected by two rivers which provide additional hazard risks. However, every village is unique and therefore a case study of Sapapali'i includes a number of elements unique to the village. For example it is less isolated than many other rural villages, only ten minutes drive north of the ferry terminal at Salelologa. This has implications in terms of access to resources from Upolu and people's ability to commute to Apia during the week.

The Samoan Context

Samoa is a group of volcanic islands located in the central Pacific. The eastern group of islands form the unincorporated territory of American Samoa, while the western group, comprising Upolu, Savai'i, Manono and Apolima form the independent state of Samoa (see figures 1.4 and 1.5). This thesis focuses on latter of these two groups. Samoa has a population of 176,710, and together with the Apia urban area, north-west Upolu is home

to 51.8% of the population. Samoa consists of about 330 villages and is divided into 43 districts. The islands contain a varied topography ranging from long stretches of white sand beaches to tropical hardwood forest and further rising to a mountainous interior with peaks rising to 1,850 meters high (Ward & Ashcroft, 2003).

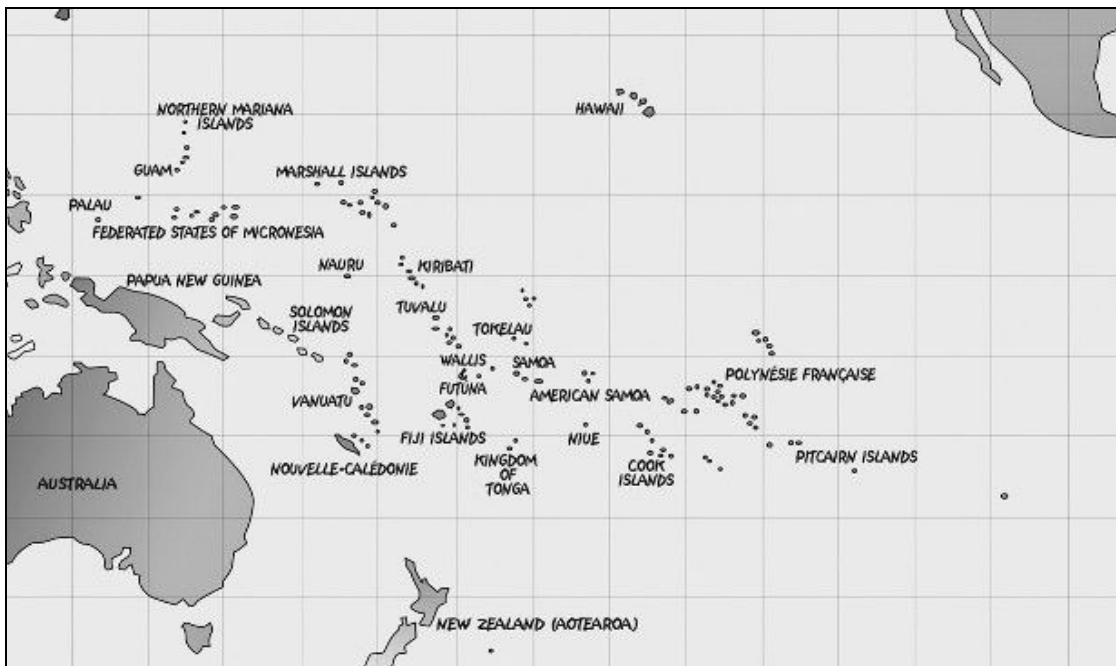


Figure 1.4: Map of location of Samoan Islands located in the Pacific (Source: www.spc.int/piocean/forum/New/picts.htm)



Figure 1.5: Map of Samoa

(Source: http://go.hrw.com/atlas/norm_map/samoa.gif)

Upolu and Savai'i are aligned southeast-northwest and lie almost parallel with the prevailing southeast trade winds dominating for half of the year. Therefore, unlike many other Pacific islands, Samoa has no strongly marked dry/wet side division. The average range of mean temperatures at sea level in Apia is very small, with a mean monthly temperature of 25°C in July and 26°C January-March. Temperature falls significantly with increasing altitude and cloud cover and humidity also increase. These climatic changes influence crop and land use distribution. Most parts of Samoa receive over 2,500mm of rainfall annually and rainfall increases rapidly with elevation to exceed 6,000mm in the highest regions of Savai'i. Although there is little seasonal variation of rainfall in some parts of Samoa, coastal parts of northern and western Upolu, and all of Savai'i (except the southern coast) have a seasonal dry period from May-September (Ward & Ashcroft, 1998).

Samoa's geographical location and physical landscape make it prone to a number of hazards, including cyclones, flooding, and tsunamis. Historical records confirm that a number of disaster events have occurred since records began in the late 1800s. Given the

context of a globalised and continuously evolving world, Samoa's hazard risk is seen to be increasing. Processes such as climate change, deforestation, urbanisation and economic development are increasing many hazard risk factors.

Exponents of the Austronesian culture left South East Asia about 7,000 years ago and travelled southwards through Papua New Guinea continuing down towards the south-Pacific and reached the Fiji-Samoa-Tonga triangle about 3,000 years ago. Over time the Austronesian culture adapted in Samoa as a result of local conditions. Samoan culture was also influenced by high levels of inter-island migration (So'o et al., 2006a).

Europeans first made contact with the Samoan islands in the late 1700s. During the 1800s there was increasing contact with European travellers, especially Christian missionaries. The Methodists commenced missionary work at Satupa'itea in 1828, the London Missionary Society established a mission site Sapapali'i in 1830, and Catholicism was established in Apia by 1845 (Macpherson, 2004).

The 1800s was a difficult time politically for Samoa as three foreign powers - Germany, the United States of America (USA), and Great Britain competed for territorial possession of the Samoan islands. The outcome was a division of the island group with the USA gaining possession of what is known as 'American Samoa' and Germany gaining what is known today as Samoa. Britain was forced to shift its interests elsewhere in the Pacific (So'o et al., 2006a).

In 1900, the western group of islands (present-day Samoa) came under German colonial rule, however, in 1914, at the start of World War One, New Zealand took control of Samoa from Germany. After World War One, Samoa became a League of Nations Mandate administered by New Zealand. After World War Two, New Zealand administration continued under a United Nations Trusteeship until Samoa attained its independence in 1962 (Ward & Ashcroft, 1998). Compared with other Pacific countries, Samoa has been relatively peaceful and stable politically since independence (So'o et al., 2006a).

Fa'a Samoa, translated as the 'Samoa way of life' embodies thousands of years of language and cultural development. As Va'a (2006: 113) states in the *Samoa Human Development Report*:

'Fa'a Samoa 'represents a solid core of knowledge and practice, which has been largely responsible for the survival of the Samoan people into this third millennium. Therefore it is a treasure to be preserved and jealously guarded'

Central elements of *fa'a Samoa* include attachment to traditional lands of their *aiga* (family groups) and villages, to their pastors and churches, to their *matai* (chiefs) and *aiga*, to their language and to their cultural practices and ceremonies. In Samoan society everybody has a place (role) and a status which is attached to this and roles are very hierarchical. Samoan society is noted for its aristocratic system of government which culminates in the *fa'a matai* (chiefly system) that is still central to Samoan social and political organisation today. It is, however, important to note that *fa'a Samoa* is not a static set of cultural ideas but is constantly evolving, especially within the context of an increasingly globalised world.

Samoa is a strongly Christian society and the church plays a prominent role in Samoan politics and daily life exemplified in the national motto '*Fa'avae I le Atua Samoa* (Samoa is founded on God)' (Macpherson, 2004). According to the 2001 Census 99.5 per cent of Samoans report nominal adherence to a Christian denomination and 72.2 per cent of the total population of Samoa are members of the National Council of Churches (NCC) which comprises of the three main Christian churches – Congregational Christian Church (EFKS), Catholic Church of Samoa and the Methodist Church of Samoa. These churches were the first to arrive in Samoa and have the greatest number in members (Macpherson, 2004; Kolia, 2006).

The relationship between religion, daily life and politics in Samoa is very strong. Since independence in 1962, the church has worked alongside the state in developing a vision for Samoa as a nation, and democracy, culture and Christian values have integrated at a national and local level (Koila, 2006). At the local level the church is a focal point of

every village and community and plays a central role in people's daily lives through church committees, choirs, youth groups and through service to pastors. Pastors are held in high esteem within villages and hold a level of authority similar to that of a senior *matai*. The church has received widespread criticism, especially in terms of the financial contribution made by Samoans to their churches. It has been argued that the high level of financial contributions negatively impacts on family development and increases levels of hardship and poverty. These issues will be explored in greater detail in Chapter Five.

A central development focus for Samoa is sustaining and improving economic growth. Samoa has a small open economy which has traditionally been dependent on agriculture, fishing, remittances from family members overseas and development aid (Salele, 2006). The agriculture and fisheries industries employ about two-thirds of the Samoan labour force and comprise approximately 80 per cent of exports, most notably coconut products (coconut cream, oil and copra), nonu juice and fish. Tourism is being increasingly promoted by the Samoan government as a tool for economic development, and accounts for 25 per cent of GDP. Approximately 100,000 tourists visited Samoa between 2004 and 2005 (Salele, 2006).

According to the most recent Samoan household survey, 82 per cent of households are male-headed and 28 per cent of people over 10 years old are employed (full-time, part-time or self-employed). The average household weekly expenditure is \$575 Samoan Tala (SAT) with the greatest weekly expenditures being societal financial contributions (e.g. church donations), utilities (telephone and electricity) and food (Salele, 2006).

There are regional differences in terms of income and economic characteristics. The greater Apia urban area which contains the majority of Samoa's population is estimated to generate more than 70 per cent of Samoa's national income (Salele, 2006). However the income gap between Upolu and Savai'i has been growing and the goal of hardship reduction and providing sustainable livelihood opportunities for rural Samoans continues to be a challenge for the Samoan government and development agencies.

Women have always been held in high esteem within Samoan culture. However, there are areas of segregation based on custom, culture and tradition and on physical attributes. These gender differences, often organised in terms of 'roles' are frequently based on the distribution of labour within the family and the community. In terms of education, males and females have similar percentage representations in terms of reading and writing ability and attendance in post-secondary education. This is favourable in terms of the Millennium Development Goal target of eliminating gender disparity in education (Elisara-Laulu, 2006).

According to the 2001 census, of those aged 15 years and over, 67.5 per cent of males were economically active, while only 32.2 per cent of women were economically active. This is largely a result of categories within the census which resulted in the majority of females, 62.2 per cent, in this age-group declaring they were 'housewives' or engaged in 'housework' (Elisara-Laulu, 2006). Within the public sphere three women are Members of Parliament and seven are currently Chief Executive Officers (CEOs) of Government Ministries. A number of women also hold positions as deputy CEOs and prominent positions in the NGO and private sector (Elisara-Laulu, 2006).

A significant factor in terms of social and economic processes is the impact of high levels of out-migration from Samoa, particularly from rural areas. A migrant study undertaken in 1992 by Va'a (2001) showed that from 1961 to 1991, 38,832 Samoans had migrated to New Zealand. The principal life world of most Samoans encompasses not only Samoa and American Samoa but New Zealand, Australia and the USA where many relatives and friends have migrated to. Although distant in terms of geographical proximity, these countries are 'close' in terms of flows of money, goods, people and information. There are high levels of economic, social and political exchange between these regions. To offset the disadvantage of a reduced rural labour force in terms of economic development, rural Samoans regularly receive remittances from relatives overseas. This enables many families to survive in an increasingly competitive and cash-oriented environment as well as meeting their social obligations to the church or village. Disaster and development practice and policies reflect these linkages at a national level. At a local

level the degree of connectedness between families in villages and their relatives overseas is apparent in terms of support for daily needs and in post-disaster contexts.

Historical Background of Disasters in Samoa

How history renders a community vulnerable is not simply a matter of understanding a hazard as an event but also of considering it as a process that constructs its own perception of disaster (Bankoff, 2004b). It is important to understand the historical relationship between disasters and culture in Samoa in terms of how *fa'a Samoa* has impacted on understandings of disasters and disaster risk over time. As Bankoff (2004b) emphasises, culture not only determines *how* a disaster comes about but even *what* constitutes a disaster in the first place.

There is a long legacy of disasters in Samoa with official records dating back to as early as 1831 (see Visher, 1925). The cyclone of 1889 is commonly cited in historical discussions of disasters, largely because of the legacy of the storm, which is said to have prevented war between Germany and the United States over control and ownership of the Samoan islands.

Six warships were in the bay at Apia and at the point of opening fire on each other a storm broke out. The editor of the *Independent* (Visher, 1925: 134) wrote that:

'Then the storm broke. There were thirteen unlucky vessels afloat in Apia Bay when the sun rose. When it set, there were none. Twelve were sunk or grounded. One, the British warship "Calliope", had steamed out of the harbour mouth against the storm. If the battle had been fought, the loss of shipping could not have been greater. Of the crew of the American "Vandalia," forty-three were lost. Of the eighty Germans on the "Eber," only four were saved. When the news of the happenings reached Europe and America, the horror of it banished all thoughts of war'

The author Robert Louis Stevenson was living in Samoa at this time and also wrote of the historical significance of this cyclone:

'The hurricane of March 16, made thus a marking epoch in world history; directly and at once it brought about the congress and treaty of Berlin; indirectly, and by a process still continuing, it founded the modern navy of the United States. Coming years and other historians will declare the influence of that navy.' (Stevenson – cited in Visser, 1925: 135)

What is less commonly mentioned, however, is the heroism of many Samoans who rushed into the seas to save dozens of sailors, who had been the enemy only hours before. A small monument on the Apia foreshore recalls the tragic disaster and the 150 sailors who died, but makes no mention of the brave rescue efforts by local Samoans (O'Meara, 1990). This cyclone was commonly mentioned in my research as the oldest cyclone that participants could recall elders in their village discussing.

Disasters

Compared with other Pacific countries to the south and south-west, Samoa has experienced relatively few cyclones over the last century (Satyendra, 1992; Ward & Ashcroft, 1998). In many years tropical depressions affect Samoa with strong winds and heavy rainfall but do not develop into full cyclones with hurricane force winds (over 116kph). According to records from 1939 to 1969, an average of two to three tropical storms affected Samoa each year. A windstorm in 1964 resulted in the deaths of 250 people, while in January 1966, a tropical cyclone, with near hurricane-force winds gusting up to 82 knots (150kph), caused extensive damage and resulted in the deaths of ten people. The edge of Cyclone Gina hit Samoa in January 1989 and brought near hurricane-force winds which affected the whole country (Satyendra, 1992; Ward & Ashcroft, 1998).

Although cyclones have perhaps been the most devastating disasters in Samoa, in terms of economic costs and loss of life, other disasters have affected Samoa in the past decade including volcanic eruptions (1905-1911), earthquakes, tsunamis, flooding and drought. All of Samoa's mountains are of volcanic origin and several volcanoes are still considered active. Major eruptions occurred in northern Savai'i in the early 1900s. Droughts are frequent but usually minor. Western Upolu and Savai'i are the regions most

vulnerable to droughts (Satyendra, 1992). Torrential rain (often accompanied by cyclones) frequently causes flooding and depending on the intensity of this rain can also lead to landslides. The risk of landslides has increased with increasingly widespread deforestation in inland regions of Upolu and Savai'i.

Earthquake activity in Samoa is also relatively high although earthquakes of significant magnitude (greater than 8.0 on the Richter scale) only occur approximately two times each century. The last severe earthquake occurred in 1917 and measured 8.3 on the Richter scale. It damaged buildings, triggered landslides, and caused high seas to flood houses and plantations close to the coast (Ward & Ashcroft, 1998). The presence of earthquake activity in ocean areas also means that Samoa is at risk of tsunamis. However, the force of tsunamis is often mitigated by the protection of off-shore reefs which surround the islands.

Cyclones Ofa and Val (1990/1991): A brief outline of events

Cyclone Ofa, a category five cyclone, struck Samoa on 1st February, 1990 and ravaged the islands of Samoa for three days. It was the most severe storm to strike Samoa in over 100 years. The eye of the cyclone passed approximately 80km west of Savai'i travelling in a south-east direction (see figure 1.6 for a map of the path of Cyclone Ofa). Ofa brought northerly and westerly winds of up to 111 kilometres per hour (kmph) and gusts of up to 216 kmph were recorded (Ward & Ashcroft, 1998; Elmqvist, 2000). The accompanying high seas caused coastal erosion in northern Upolu and northern Savai'i. Savai'i was the worst hit of the two main islands.

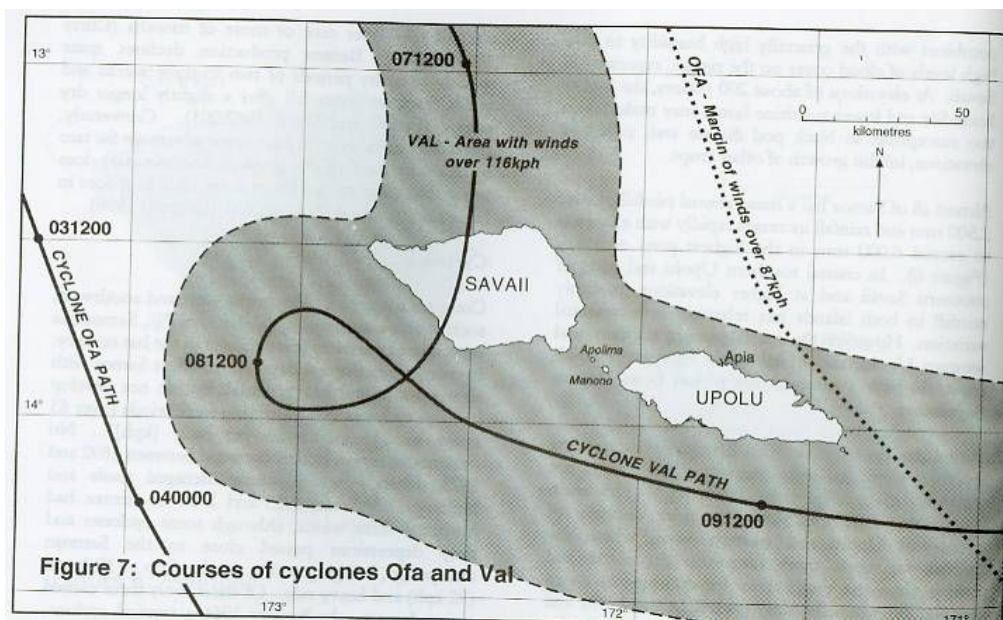


Figure 1.6: Courses of cyclones Ofa and Val (Source: Ward & Ashcroft, 1998)

Less than two years later, Cyclone Val, a category five cyclone hit Samoa. The first storm warning for Cyclone Val was received on Friday 6th December, 1991. It was upgraded to a hurricane warning (the highest wind warning) shortly after this. By Friday evening, Val had begun its assault on Samoa. Val lasted for four days until the early hours of Tuesday, 10th December, 1991 and was extraordinary for its intensity, irregular path and shifting speeds (Satyendra, 1992) (see figure 3 for map of the path of Cyclone Val).

Impacts of Ofa and Val

The impacts of Ofa and Val are both short-term and long-term, and had major implications in terms of national and local development. Although the impacts were largely negative in nature, there were some positive development outcomes from the disasters, including changes in building codes and tree species used in forestry. These will be explored later in this section. Such outcomes emphasise the need to conceptualise disasters in ways which acknowledge the multiple ways (both positive and negative) in which they impact on development processes.

The total cost of damage throughout Samoa from Cyclone Val was estimated to be approximately \$US 368 million (Crawley, 1992). Aid from Australia and New Zealand

arrived immediately after cyclones Val and Ofa but reconstruction took many months or in some cases, years. Remittances from family abroad, particularly Australia, New Zealand and the United States, contributed significantly to the rebuilding process and according to Ward and Ashcroft (1998: 21), 'the nation's overall success in its reconstruction demonstrated the strength of linkages with the far-reaching span of the international Samoan community.'

Because Cyclones Ofa and Val struck within a period of less than two years it is difficult to distinguish between many of the impacts of each individual disaster. Therefore the following impacts are discussed with relation to both disasters, although they will be discussed separately where possible.

Housing

Damage to housing in Cyclones Ofa and Val was considerable. Initial estimates from an aerial survey by the United Nations Disaster Relief Organisation (UNDRO) on the 7th February, four days after Cyclone Ofa ended, were that about 50 per cent of houses on Savai'i and ten per cent of houses along the coast of Upolu were destroyed (UNDRO, 1990). A conservative estimate of the total number of houses destroyed in Ofa is 661 houses destroyed on Savai'i and 529 houses destroyed on Upolu (Nanai, 1992). Of the 661 houses damaged on Savai'i, 386 were estimated as 100 per cent damaged, while on Upolu, 48 houses were reported as completely destroyed. The houses included church buildings, schools, women's committees' houses and *palagi*-styled houses (Nanai, 1992).

Preliminary surveys after Cyclone Val indicated that damage to housing was double that caused by Ofa 22 months earlier. This was largely a result of the higher strength winds associated with Val, as opposed to Ofa where much of the damage was the result of coastal storm surge and heavy rainfall. Rough estimates suggest that about 80 percent of all houses in Western Samoa were destroyed during Cyclone Val from Friday 6 December 1991 to Tuesday 10 December 1991 and almost all of the repair work to houses carried out after Cyclone Ofa was damaged by Cyclone Val (Gupta, 1997). On Savai'i, where Val crossed the country, the villages located at two ends of the island near

the coast were almost wiped out. More than 90 percent of all dwellings on Savai'i were destroyed (Gupta, 1997).

There was also significant damage to other buildings including schools and churches, which play a central role in the life of communities. As a rule buildings such as schools and hospitals should be those most able to withstand disasters, because during disasters such buildings are often used for purposes such as evacuation centres and temporary shelters. Gupta's (1997) research revealed that during cyclones Ofa and Val, many people went to schools and churches to seek shelter, assuming that they were safer than their own homes. This could account for the very low casualty rate in relation to the proportion of houses destroyed.

In the late 1980s the Australian International Development Assistance Bureau funded the development of National Building Codes for six Pacific countries including Samoa. This project was driven by repeated widespread damage to houses during disasters, illustrating the need to improve structural standards of buildings (Bola, 1999). The damage to buildings during cyclones Ofa and Val further emphasised the extent of this problem and the need to upgrade building standards.

Although the National Building Code has been in existence since 1990, there have been numerous problems relating to enforcement, including the capacity to carry out building inspections across Samoa (Bola, 1999). Planning and implementation of developments around Samoa have been commonly undertaken without prior risk assessments (F. Nelson, pers comm., 2007). However, since the enactment of the Planning and Urban Management Act 2004, all developments (anything that people build, establish, install or even demolish on land or in the ocean) requires the Planning and Urban Management division of the MNREM to conduct preliminary risk assessment of the proposed development as part of the consent process. Changes to implementation of the code have led to greater levels of compliance in Samoa, and it is hoped that stricter building codes will increase people's resilience in disaster events (F. Nelson, pers comm., 2007).

Infrastructure

Cyclones Ofa and Val caused major damage to north-east coastal roads on both Savai'i and Upolu. Road reconstruction and sealing projects were undertaken with international development assistance in 1992-1993 to restore major roads which had been damaged during Ofa and Val (Ward & Ashcroft, 1998).

Electricity supplies were also affected by Cyclones Ofa and Val. During Cyclone Ofa the Samoan government made the decision to cut off the electricity supply just after 11pm on the 1st of February, 1990. This was a safety precaution to prevent people from being electrocuted by falling wires. After the cyclone the government gave priority to restoring electricity in Apia so that food supplies (required by the whole country) would not spoil (Nanai, 1992). It was many months before electricity was restored to all villages in Samoa, particularly isolated villages on Savai'i.

Agriculture

The Samoan economy, like that of many Pacific nations, has traditionally depended on a narrow range of commodities, mostly from agricultural, fisheries and forestry sectors. The dependency on this narrow range of commodities is amplified by the limited carrying capacity of Samoa's island environment. Because of the small scale of Samoa's economy, the damage wrought by one disaster can easily exceed the country's GNP and set back development for years (SPREP & United Nations Department of Humanitarian Affairs & Emergency Management Australia, 1994). This was certainly the case after cyclones Ofa and Val.

The damage of cyclones Ofa and Val to agriculture, both in terms of local food production and export crops, was devastating. There were, however, clear differences between tree and root crops, with root-crops being much more resistant to cyclone conditions. According to Paulson (1993), after Cyclone Ofa, the food supplies of villages with large areas of taro were not as disrupted as those villages which depended more on breadfruit and bananas. These latter two crops suffered almost 100 per cent damage

during Cyclone Ofa. In contrast, the tubers of mature taro could be harvested immediately, and immature taro recovered quite quickly (Ward & Ashcroft, 1998).

Many areas of Samoa in which food production had largely recovered from Cyclone Ofa by mid 1991 were set back to a greater degree by Cyclone Val. Tree crops such as coconuts and cocoa were virtually out of production for well over two years following Val, and five years later, cocoa exports still had not recovered (Ward & Ashcroft, 1998).

Although the impact on exports may appear small in terms of raw numbers compared with cyclone damage internationally and much lower than disaster-related damages in other regions of the world, these export losses had a large impact on Samoa. Relative to Samoa's GDP and population, these losses in export earnings were significant and economic recovery from the cyclones took some years.

Forestry

The forestry sector suffered severe damage as a result of cyclones Ofa and Val, especially Val where the majority of damage was a result of high winds. Leaf and branch loss was most severe in forests on Upolu and landslides occurred in steeper land following the rain which accompanied the cyclone. Forests on Savai'i (especially the western region) suffered the greatest damage overall, with more than 90 per cent of the primary forest defoliated (Elmqvist et al, 1994). A survey of forests after Cyclone Val showed that 45 per cent of Savai'i's remaining merchantable timber trees were blown down (Division of Forestry, 1992, in Ward & Ashcroft, 1998). Cyclone damage further increased the proportion of Samoa cleared of forest (see figure 1.7). Deforestation rapidly increased in the second half of the twentieth century as a result of cash-cropping for export. Bananas and cocoa were the most valuable crops on the international market in the 1950s before a collapse in banana export trade in the 1960s and a drop in prices for copra and cocoa. This resulted in a transition to taro export in the 1970s, which was largely the result of a growing Pacific Island migrant population, particularly in New Zealand (Ward & Ashcroft, 1998).

Year	Upolu	Savai'i	Total Samoa
c. 1954	65	79	74
c. 1987	43	63	55
<i>1990</i>	<i>25</i>	<i>50</i>	<i>40</i>

* note: The 1990 figures are italicised to stress that they cannot be compared directly with those for c.1954 and c.1987

Figure 1.7: Percentage of Land Area under Forest, c.1954, c.1987 and 1990 (Source: Ward & Ashcroft, 1998: 31)

After the cyclones, log exports were banned and logging was restricted to areas which suffered 80 per cent or more damage. This action was taken in order to reclaim as much as possible of the fallen timber, while allowing less damaged forest areas to recover to some extent (Ward & Ashcroft, 1998; FAO, 2003).

As a result of the damage to the forestry sector by cyclones Ofa and Val, timber production remained low for a number of years. Of Samoa's pre-cyclone total of 7,000 hectares of forestry plantations (predominantly *Eucalyptus deglupta* and mahogany – *Swietenia macrophylla*), only 1,850 hectares remained after Val (Ward & Ashcroft, 1998). These plantations, mostly located on government land or on customary land leased for forestry, had been developed with a series of foreign aid projects and covered most of the coastal areas of Samoa (Ward & Ashcroft, 1998). Following these cyclones, there has been a major shift in species composition in plantations with a move towards hardwood species such as *Swietenia macrophylla* that have much greater resistance to strong winds. There has also been a government shift towards promoting the banning of logging from many regions of Samoa and the promotion of Forest Conservation Agreements (FCAs) with villages (FAO, 2003).

Therefore although the impacts of Ofa and Val were devastating, they have also lead to improvements in some development processes, for example, through improving building standards and including new tree species with greater wind resistance in plantations. The devastating impacts of cyclones Ofa and Val resulted in significant changes to disaster

management and development and policy at the national level in Samoa. The following section will explore the impacts of Ofa and Val in terms of new approaches to understandings of disasters and disaster education and policy in Samoa.

Linking Disasters and Development

‘...just as is increasingly said in critiques of development, real improvements in disaster prevention and mitigation will only come about if they originate in or are in step with social and political improvements’ (Hewitt, 1995)

A central focus of this thesis is the need to move away from ‘event-centred’ approaches to disasters which often separate disasters from the broader development context, placing disaster and development theory/practice in separate conceptual silos. Instead, by acknowledging and engaging with critiques and alternative approaches to development we can explore the similarities in terms of criticisms of disaster management as well as aspects of alternative development approaches which may be salient in terms of disaster risk reduction.

Development theory and practice has come under increasing criticism from both academics and development practitioners. Central to these critiques is an assertion that development has been used a ‘tool’ by the west to define and maintain control over the so-called ‘third world’. According to Escobar (1995a: 44), a key figure in critiques of development,

‘Development was, and continues to be for the most part – a top-down, ethnocentric, and technocratic approach, which treated people and cultures as abstract concepts, statistical figures to be moved up and down in the charts of ‘progress’.’

According to Escobar, the ‘third world’ has been discursively ‘created’ to legitimise the power and control asserted over these regions of the world by western ‘experts’ under the guise of ‘development’. Early development theories emphasised the need for

‘modernisation’ and ‘western’ goals in terms of ‘development’ in ‘third world’ countries and the belief that with the appropriate assistance and willingness to ‘develop’, these regions could ‘catch-up’ with the ‘west’. Many of the critiques of development theory and practice are just as salient within the field of disaster management. According to Hewitt (1995: 118), disaster management approaches by ‘western’ governments/development agencies in ‘third world’ regions...

‘...reassert a top-down, technocratic and Western expert vision. The underlying geography of the initiative was for ‘advanced’ nation expertise to be deployed and passed on to other governments and projects, and to train ‘disaster managers’ in other countries.’

Development processes can often have negative impacts in terms of hazard risk. A number of academics have outlined the ways in which development interventions which offer the promise of ‘modern life’ continue to increase the range, severity and/or concentrations of hazard risk (for example, Wijkman & Timberlake, 1987; Smith, 1992; Cutter, 1993).

The criticism of dominant models of development theory and practice has led to what has commonly been termed the ‘crisis of development’ and given rise to the emergence of ‘post-development’ and ‘alternative development’ models. According to Peet and Hartwick (1999: 153) postdevelopmentalism,

‘rejected the way of thinking, and the mode of living, produced by modern development, in favour of revitalized versions of non-modern, usually non-Western philosophies and cultures’

Alternative development similarly argues for local conceptualisations of development and for locally-owned solutions to development challenges. ‘New social movements’ are central to many of these new forms of development practice. According to Escobar (1995b: 227),

'social movements, as symbols of resistance to the dominant politics of knowledge and organization of the world, provide some paths in the direction of this calling, that is, for the re-imagining of the 'Third World' and a post-development era.'

As Peet and Hartwick (1999: 210) also argue, rather than rejecting development, these alternative theories allow us to 'rethink, restructure, and rework "development".' The re-thinking of development theory and practice also has valuable lessons for disaster theory and practice, which have come under similar criticisms in terms of approaches. Hewitt (1995: 127-128) outlines the need for disaster and development geographies to be critiqued,

'the prevailing development and disaster geographies have not been created by geographers and are only rarely subjected to critique by them...The maps and geographies, the notions of geographical information and knowledge currently favoured are singularly inadequate and misleading in the contexts of development and disaster...we have promoted a view of development as demanding state intervention by the Centre, informing, teaching or legislating for those who might be seen to need it.'

Approaches to disaster management and disaster theory also need to be locally specific and move away from top-down technocratic approaches to ones which emphasise the importance of being locally-led. There also needs to be a move away from the dichotomised 'reality' where hazard risk and disaster events have been segregated and targeted separately from everyday life and development (Hewitt, 1995).

The relationship between disasters and development is often a challenge in practical terms. Development is often undermined or subverted by short-term relief efforts which, it has been argued, often merely restore or reconstruct pre-existing vulnerabilities and inequalities (Peacock & Ragsdale, 1997; Anderson & Woodrow, 1998; Quanterelli, 1999; Bradshaw, 2002). Often these relief efforts further undermine development strategies through the creation of a culture of aid dependence and reliance on NGO assistance.

For development agencies, a disaster situation creates further difficulties as a result of having to tailor their programmes to meet short-term emergency relief demands. This

contradicts their primary function which is usually focused on the creation of long-term, sustainable development projects. As Anderson and Woodrow (1998: 7) explain:

'[t]he commitment to development is clear and unshakable among non-governmental organizations. However, when circumstances require them to respond with immediate humanitarian relief, development goals are often lost or at least deferred while emergency efforts prevail...With regret, agencies feel that they cannot maintain their commitment to development while disaster response is demanded'

In some disaster situations NGOs can make the mistake of viewing disaster relief situations as damage and repair, rather than as a consequence of deeper more fundamental elements of everyday life. In such a situation, NGOs run the risk of perpetuating short-term stop-gap relief rather than strategies more aligned with their primary work which will provide for long term sustainable solutions.

A central focus of reducing disaster risk by both disaster researchers and practitioners is community and individual resilience and vulnerability. Vulnerability assessments are a common tool used for assessing degrees of risk in particular locations. Although such assessments are valid, too often 'vulnerability' and 'resilience' are seen as opposite ends of the spectrum, with people being seen as either resilient or vulnerable in a disaster event rather than possessing elements of both. People in these communities manage levels of vulnerability according to their priorities and capacities as part of their daily existence. Therefore, vulnerability to 'disasters' can only be fully understood and addressed through the consideration of these events within people's everyday livelihoods and underlying vulnerability. Because vulnerability is so closely tied to broader societal and environmental processes of development it cannot be treated as a separate phenomenon in times of crisis (Hewitt, 1983; Winchester, 1992; Allen, 2003).

Anderson and Woodrow (1998) are amongst those who have outlined a framework which uses a matrix of vulnerabilities and capabilities, to help development practitioners 'hold fast' to development aims during disaster situations. Recognising the two sides, vulnerabilities and capabilities, is an important conceptual advance for disaster studies

that comes out of re-working within the fields of development theory and practice (Fordham, 2003). Vulnerability analysis has been used widely within the field of disaster studies, but Anderson and Woodrow's (1998) conceptualisation is much broader, encompassing positive and negative aspects as well as development potential. According to Fordham (2003: 63) capacities and vulnerabilities analysis has the potential to 'radically change the process of disaster management' by challenging the dominant command and control model. Instead it focuses on treating disaster mitigation as part of everyday social and economic development.

Disaster Management and Development Policies

Development Policies

Although often addressed as one-off events at the local level, analysts believe disasters are much more meaningful in the context of people's everyday lives and when understood as an element of broader development challenges. As Homan (2003: 153) states,

'it is only by understanding the deep-rooted beliefs and causal mechanisms that influence the ways in which people explain the hazardous natural world that culturally acceptable solutions to disaster that are meaningful and acceptable to people are likely to be adopted'

Livelihood patterns in Samoa are changing. In terms of employment patterns there is a general movement of people both out of subsistence production. Unemployment is already becoming a visible problem in Samoa because of the overall shortage of paid jobs and the shortage of skilled people to fill the job opportunities that do exist. One method of countering this problem is the government's strategy of improving livelihood opportunities, especially by revitalising the village economy to give people alternative means of earning a cash income. The government is assisted in this strategy by NGOs such as Women in Business Development (WIBD), who are providing rural families with livelihood opportunities. WIBD's projects include *ie sae* (fine-mat) weaving, organic

nonu production, and coconut oil production and these projects provide families with the opportunity to earn a cash income.

Since 2000 the Samoan government has indicated its commitment to the attainment of the Millennium Development Goals (MDGs) in its national policies, plans and resource allocation. The government's view is premised on the fact that the government's tri-annual development plan *Samoa's Development Strategies* (SDS) which were implemented in 2003, 2004 and 2005, are aimed towards meeting objectives similar to the MDGs.

Poverty is quite a new public concern in Samoa. Compared with other Pacific countries, Samoa has a middle ranking in its standard of human development. In 1999, Samoa ranked seventh in the region on its Human Development Index (HDI) and sixth on its Human Poverty Index (HPI), out of a total of 14 Pacific nations (Muagututi'a, 2006). Although poverty is not a new phenomenon it has been less recognised in the past because the close-knit nature of Samoan society. The tradition of sharing resources through family and community networks is expected to even out a lot of material wealth differences. There is, however, a proportion of the population who live in hardship. According to the 2002 Household Income and Expenditure Survey (HIES), eight per cent of 23,000 households registered in the 2001 Census of Population and Housing were below the food poverty line (measured by basic nutritious diet) and 20 per cent below the Samoan-defined basic needs poverty line (Muagututi'a, 2006). The basic need requirements include education, health, church contributions and cultural obligations (*fa'alavelave*) at events such as weddings, funerals and bestowals. Given that the basic needs are defined in terms of the Samoan cultural context, it is difficult to make cross-cultural comparisons in terms of poverty. Clearly components such as gifts/money for *fa'alavelave* fall outside of what would be defined as 'basic needs' in other regions of the world.

Although Samoa is a small country, there are significant internal regional differences in terms of development and livelihoods, particularly between the semi-subsistence

economy of most of Savai'i and Upolu, and the largely urban and monetized economy of Apia and much of the north-west coast of Upolu. Figure 1.8 (see below) outlines some of these differences between Savai'i and Upolu.

	Upolu	Savai'i
Population Density (people per sq km)	123	25
Per cent of Population in Samoa	76	24
Households engaged in Farming (%)	64	96
Farming households who produce only for household use	59	92
Farming households in commercial production	5	4
Agriculture households with piped water supply (%)	81	76
Agriculture households with electricity supply (%)	93	92
Population growth rate	0.7	0.1

Figure 1.8: Differences between Upolu and Savai'i (Adapted from Muagututi'a, 2006: 60)

Beyond material poverty, there is a growing recognition in Samoa of poverty of opportunity, which can be assessed in regard to education, employment, health, material well-being, access to markets, social freedoms etc. Other limitations on livelihood choices are linked to economic, cultural, political and environmental vulnerability factors. If vulnerability to disasters is to be adequately addressed, an approach needs to be taken which focuses on livelihood sustainability as a way of reducing vulnerability to hazard events.

Disaster Policy and Management

In July 1985, Samoa's first National Disaster Management Plan (NDMP) was developed. Prior to this, the Samoan Government had operated an ad hoc committee to deal with disasters. There were no management plans, policies or legal mechanisms, no emergency operation centre and no office with designated staff for disaster management (Nelson, 2005).

In 1986 the first National Emergency Plan was approved by Cabinet. This led to the establishment of a National Emergency Co-ordinating Committee and an International

Relief Working Group. Disaster management programmes were co-ordinated by the Department of the Prime Minister. The plan was later revised and approved in 1997. This revised version was quite lengthy and focused on preparedness, response and recovery. Apart from the above committees, government departments and NGOs were allocated disaster management responsibilities according to their specialist skills. For example, the Department of Public Works co-ordinated the rehabilitation of physical infrastructure.

In 1997 the first National Disaster Management Officer (NDMO) was appointed and the National Disaster Council (NDC) was formed. At the same time the National Emergency Co-ordinating Committee was renamed the National Disaster Management Working Group (NDMWG) (see figure 1.9 for an outline of Samoa's Disaster Management structure). Membership to both these groups was expanded to include more cabinet members, government departments and international organisations. Although the NDMP required the development of hazard-specific operational response plans, by 1997 only the tropical cyclones plan had been completed (Nelson, 2005).

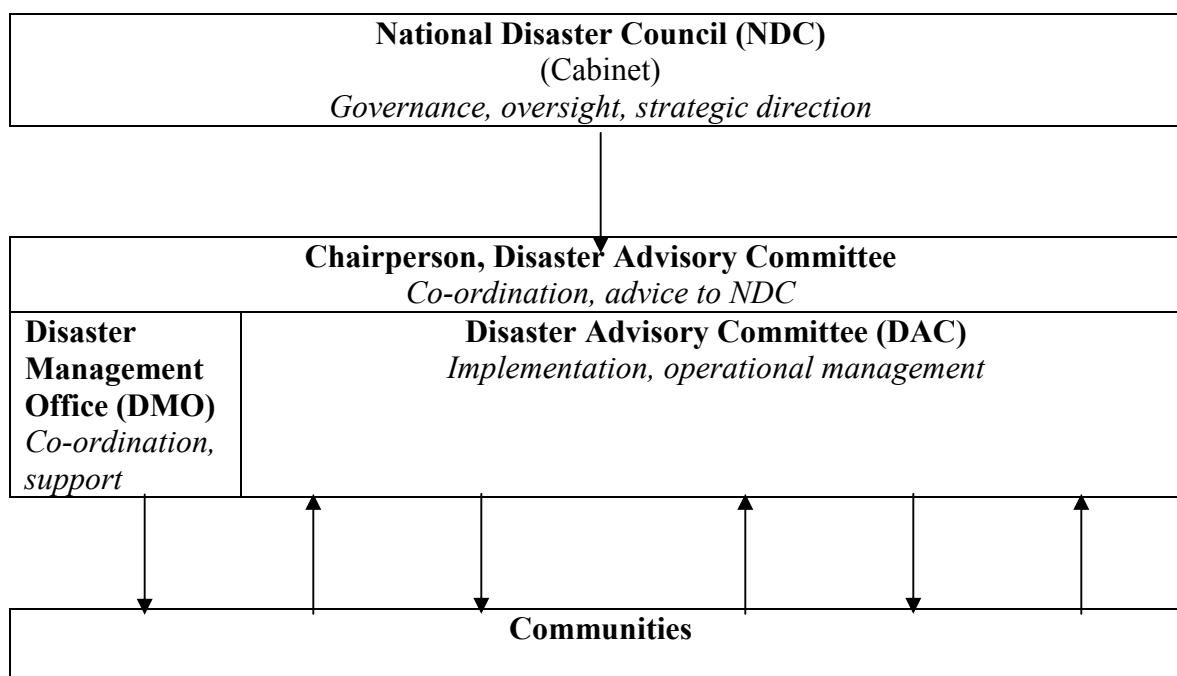


Figure 1.9: Samoa's Disaster Management Organisational Structure (adapted from Samoa's National Disaster Management Plan (DRAFT), 2006: 10)

This management structure can be broken down into the following groups with their associated tasks:

National Disaster Council (NDC): The NDC is the Cabinet of the Samoan Government and is chaired by the Prime Minister. The NDC has overall responsibility for all disaster management related matters.

Disaster Advisory Committee (DAC): The DAC is responsible to the NDC for the identification, implementation and maintenance of disaster management programmes and activities. DAC agencies are responsible for implementation of disaster management policy and plans, including hazard and risk assessment, hazard mitigation, education, public information, warning systems, and training. The Chairperson of the DAC is the CEO of the Ministry of Natural Resources, Environment and Meteorology (MNREM) and DAC members include both Government, NGO³ representatives and includes representatives from the embassies of Australia, China, Japan, New Zealand and USA.

Disaster Management Office (DMO): The DMO, located within the MNREM is responsible for ensuring the ongoing co-ordination, development and implementation of disaster management programmes and activities in Samoa.

Communities: Village councils, consisting of village *matai*, are responsible for co-ordinating disaster mitigation and preparedness programmes and activities at the community level, and for co-ordinating village response activities for specific disaster threats. It is the role of the Ministry of Women, Community & Social Development (MWCSD) to support, monitor and liaise with village councils as they implement disaster management activities, and to keep the DAC informed of the level of village preparedness.

In July 2003 the disaster management function was transferred to the MNREM. According to Filomena Nelson, Samoa's Principal Disaster Management Officer, prior to

³ NGOs include: CARITAS, SUNGO, UNESCO, UNDP, US Peace Corps, WHO

this transfer disaster management programmes were planned and implemented on an ad hoc basis (pers comm., 2007). Programmes were reactive rather than proactive, and focused mainly on disaster response an additional problem was that programmes were not well coordinated and individual agencies were implementing their own programmes without involving other relevant agencies. These problems of lack of co-ordination and under-resourcing are not unique to Samoa. McKenzie et al., (2005), in a study of the economic impact of disasters on development in the Pacific, also identified a lack of centralisation and co-ordination as a major obstacle for disaster management.

The role of MNREM with regards to disasters⁴ is to coordinate all hazard-related programmes and to mitigate the impacts of, prepare for, respond to and recover from disasters. MNREM plans, develops and implements in collaboration with the national Disaster Advisory Committee (DAC).

Although the transfer of disaster management responsibilities to MNREM appears to have improved co-ordination between various agencies involved in disaster management/response in Samoa, there are still major challenges to face. According to Filomena Nelson, MNREM's Disaster Management Officer, the biggest challenges facing Samoa in terms of disaster management are: addressing resource limitations in terms of financial and technical support; working with a large number of response agencies (both local and international); getting the public to understand the importance of mitigation in their daily activities (i.e. the impacts of what they do on their land and in the ocean on Samoa's resilience and the importance of being prepared and being self-reliant); mainstreaming disaster risk management in development planning; and getting the government to prioritise hazard management because political influence still affects development and disaster planning.

⁴ MNRE defines disasters and hazards to include: natural, technological and biological disasters/hazards.

Thesis Structure

Chapter Two outlines the research methodology and considers the implications of central methodological issues including the ethics of cross-cultural research and positionality. In *Chapter Three* I examine the gendered nature of disaster experiences. This includes the exploration of ‘roles’ and ‘responsibilities’ assumed by men and women, and the potential fluidity of men’s and women’s disaster experiences. In *Chapter Four* I explore the ways in which people make sense of disasters and hazard risk. This chapter argues for the need to explore ‘hybrid spaces’ between resilience and vulnerability in order to more realistically situate people in relation to hazard events. In *Chapter Five* I explore the ways in which disasters and development are linked in Samoa. Although approaches have commonly ‘siloed’ the two issues, I argue that such a separation is meaningless in the context of people’s everyday lives. This chapter argues that just as disaster and development theory and practice face many of the same criticisms, for example the dominance of technocratic solutions and high levels of managerialism and ‘expert advice’, there is potential for new approaches to development theory and practice to provide valuable contributions to disaster management/theory. These potential contributions are explored within the broader context of livelihood sustainability. *Chapter Six* draws together the central themes of my thesis, explores the scope for future research and considers the implications of this thesis on disaster and development literature and practice.

Chapter 2: The Research Process

Undertaking research is a complex process and involves making decisions about research methods and epistemology. It is often a balancing act between what you want to achieve as a researcher, what the most appropriate way of undertaking research is, and what is possible within the time period you have available. This chapter discusses my research process including theoretical underpinnings, methodology, and difficulties that arose while undertaking my research. In this chapter I write myself into the research by reflecting on my positioning within the research process and the ways in which this impacted on my research and the production of knowledges.

This thesis explores the relationship between disasters and development in Samoa and challenges the notion that disasters are ‘natural’ events. My research was underpinned by questions which arose from reviewing disaster and development theory and practice. Although often overlooked in practical terms and within the literature, I was interested in the emerging awareness of the close linkages between disasters and development. Given the relative absence of research of this nature in Samoa, I wanted to explore the ways in which disaster and development theory/practice intersected in Samoa.

The central focus of my research was how these processes play out at a local level, and involved spending four and a half weeks in Sapaali'i undertaking interviews and participant observation. However, I also undertook interviews with a small number of government officials and NGOs in Apia so that I could link the local context with national disaster management and development processes. I was interested in identifying similarities and differences between the Samoa and the broader literature because there is a risk of applying blueprints from other regions of the world on the Pacific which are not appropriate for the local context. In addition to the six weeks spent in Samoa, secondary material including maps, historical records and research reports on disasters and development were used and analysed as research data.

Participant Profiles

Village Participants

** note formal interviews were not undertaken with all of these people – in some instances additional people are added to this list because they are mentioned in the research either through relationships with participants or through information given in informal conversations – an * is placed beside the names of people who were not ‘official’ participants*

Sosefina Fuatai (f)* and Letuala Fuatai (m)*

Sosefina is 44 years old and untitled. She is the wife of Letuala, 47 years old, the pastor of the Congregational Church in Sapapali’i. Sosefina was born and raised in Apia and moved to Sapapali’i when her husband was chosen as pastor by the congregation. Letuala, the pastor in Sapapali’i is the son of a pastor and grew up in Apia before training as a pastor in Fiji. Sosefina and Letuala have five children; three live in Apia, one in New Zealand and their youngest, Petelo lives in Sapapali’i with them. Sosefina has many duties to fulfil as a pastor’s wife including taking the junior Sunday school and has undertaken biblical study at the Samoan theological college. Letuala spends his days fulfilling his duties to the village as pastor.

Matalena Vaai (f)

Matalena is 25 years old and untitled. She was my main translator for research in Sapapali’i. She was born and raised in Sapapali’i where she still lives with her extended family. She spends four days a week weaving in one of the sub-villages (*faiga*). The rest of her time is devoted to unpaid work in her family and involvement with the Congregational Church and the Women’s Fellowship.

Mele Vaai (f)

Mele is 50 years old and untitled. She was born in Sapapali’i and is married to Kosi who was also born in Sapapali’i. Mele has five children, including Matalena who was also a participant in this research. Mele spends Monday-Thursday weaving (predominantly fine mats, but also sleeping mats when needed) for family and village commitments and the rest of the week fulfilling domestic and village/church duties.

Falevi Malaulau (m) and Tiresa Malaulau (f)*

Falevi is 23 years old and was born and lived in his mother's village until he was 15. At 15 he moved to Fusi, his father's village. Tiresa, who is 22 years old was born and raised in Apia. Falevi and Tiresa have been running the sewing business in Fusi for about a year and a half and have plans to expand once they have saved enough money. They are members of the local Mormon Church.

Ailini Sio (f) and Savea Sio (m)*

Alini, 71 years old, is the wife of a senior *matai* in Sapapali'i and holds a prominent title in American Samoa. She grew up in American Samoa and lived in the USA for most of her adult life working in human relations after undertaking a Masters degree. Her husband Savea, 72 years old, was born in Sapapali'i and holds a senior *matai* position in the village. He moved to the USA when he was 18 and worked for the US Navy and then for NASA. He still works on a consultancy basis for some NASA projects. Alini and Savea have four children. Savea moved back to Sapapali'i two years ago to build a fale and *maota* (royal meeting or guest house) pouesi⁵ for his family. Ailini moved back to Samoa one year ago, after these buildings were completed. Alini is a member of the Congregational Church and Women's Fellowship and Savea is a church deacon.

Sene Aiono (f)

Sene is 79 years old, a widow and untitled. Sene was born in Upolu and moved to Sapapali'i when she married (1951). She has a large family with more children than she could remember, and many grandchildren. She is widowed and lives with and cares for seven of her grandchildren (most of whom are under the age of 10). Sene does sewing for local families to earn an income and works from 6am to 5pm Monday-Friday and Saturday if she is busy. Sene is the only female deacon in the Sapapali'i Congregation Church and has been a deacon since 1992.

⁵ Pouesi is the land/site for the Maota o Malietoa Talavou

Malo Sua (m)

Malo is 55 years old and was born in Sapapali'i (his father's village) and is a *matai* in the village. He has spent all of his life in the teaching profession (as a teacher, an education advisor etc.). Malo and his wife Emele have two daughters who live with them. His family own the main store in the village, which is staffed by his daughters. They also run a guest fale business which largely caters for government/business meetings/conferences and for extended family who come and visit people in the village. Malo continues to work as a school inspector, and also fulfils his duties as a *matai* and deacon in the village.

Malama Pulotu (m) and Laufata Pulotu (f)

Malama is 54 years old and married to Laufata. Laufata, 45 years old, was born and raised on the northern coast of Savai'i, before moving to Apia when she married her husband, Malama. Malama was born and raised in Sapapali'i but moved to Apia for secondary school and further education. She and her husband have five children; one lives in New Zealand, two are at school in Apia, and two are at primary school in the village. Malama currently holds the position of Assistant Police Commissioner and spends his week days in Apia with two of his children who are attending secondary school there. Laufata moved to Sapapali'i four years ago and runs the *marketi* in the southern end of the village. Because Malama works in Apia Monday-Friday, Laufata is the primary carer for their youngest children and has responsibility for the *marketi* and overseeing the workers in their plantation. Malama travels home in the weekends to spend time with his wife, younger children and fulfil his obligations as a *matai*, church deacon and to his family.

Tufi Momoisea (m)

Tufi is 55 years old and was born and raised in Papa village, Savai'i. He is married to Faagalo and they have four children. Tufi completed tertiary study in the United States before returning to Samoa. He has held government positions for most of his career including being employed as special secretary to the Samoan Prime Minister (during the period in which cyclones Ofa and Val hit). After leaving his government position he

undertook theological training and is now a pastor for the EFKS Church in Salelavalu, south of Sapapali'i.

Naitua Sioa (f)

Naitua is 48 years old and was born in another village on the northern coast of Savai'i and is married to Matafeo who was born in Sapapali'i. Naitua has six children, most of whom live overseas or in Apia. Naitua spends Monday-Thursday weaving for family and village commitments and the rest of the week fulfilling domestic and village/church duties.

Participants in Official Capacity (Apia Interviews)

Women in Business Development (WIBD)

Karen Mapusua (f) and Adimaimalaga Tafuna'i (f)

WIBD was founded in 1990 (at the time it was called Women in Business Foundation) as a non-governmental organisation with the aim of involving women in business. WIBD evolved out of the 1990/1991 cyclone situations and the taro blight which followed in 1994. There was an increasing realisation of the need for people to supplement their incomes through small business initiatives, especially in rural areas and also the need to reduce people's need for overseas remittances. WIBD's projects include *ie sae* (fine mat) weaving, farming organic nonu and coconut oil production.

Ministry of Natural Resources, Environment and Meteorology (MNREM)

Filomena Nelson (f) (Chief Disaster Management Officer)

The work of MNREM includes disaster management, which was transferred to the Ministry in July 2003. Prior to this disaster management programmes were planned and implemented on an ad hoc basis. MNRE's disaster work is mainly to coordinate all hazards related programmes, to mitigate the impacts of/prepare for/respond to and recover from disasters.

Samoan Red Cross

Tala Mauala (f) (Secretary General)

The Samoan Red Cross provides input to a number of government committees including health and disaster management. In 1983 a memorandum of understanding was passed between the Samoan government and the Red Cross which acknowledges the autonomous status of the society. The secretary general, Tala Mauala, shoulders the majority of responsibility for the society with the support of a small core of committee members.

South Pacific Regional Environmental Programme (SPREP)

Dean Solofa (m) (Meteorology) and Taito Nakalevu (m) (Climate Change)

The South Pacific Regional Environment Programme (SPREP) is a regional organization established by the governments and administrations of the Pacific region to look after its environment. At the regional level SPREP coordinates the regional framework for climate change and its attendant round table process, and assists with mainstreaming of climate change into developmental processes and capacity building activities. Dean Solofa and Taito Nakalevu are both involved in this work.

Theoretical Underpinnings

My thesis is broadly underpinned by two theoretical approaches central to the study of disasters and development: political ecology theory and feminist theory. These two theories will be briefly explored below, outlining the ways in which they impacted on my research process and production of knowledge.

Political Ecology

'In the contemporary world of social science intense interest in the search for universal laws and global processes has often reduced the level of interest in the specific and the regional. Yet it is the complex interlocking of variables within particular places with their own unique combinations of environmental and human systems that the real world of environmental change is being played out.' (Bradnock & Saunders, 2000: 85)

As the quote above suggests, a political ecology approach emphasises the depth of uncertainty that remains within environmental/physical science in terms of methods to predict hazard risk. Political ecology approaches emphasise the need to step back from assumptions about the neutrality of scientific methods and knowledge when understanding human/environment interaction. Doing this is essential if disaster research is to contribute to explanations and predictions of natural hazard risks (Pelling, 2003).

Central to political ecology approaches to disasters is the examination of disaster discourses. Political ecologists have critically examined and attempted to reshape accepted environmental narratives, revealing the political orientation of what are often presented as scientifically neutral sets of understandings of development and environmental management policy (Pelling, 2003). These critical examinations have shown, just as post/alternative development theory has, how global discourses of disasters and development have tended to be projected from the ‘first world’ onto the ‘third world’ (Stott & Sullivan, 2000).

Furthering this idea of mapping discourses, Bankoff (2001: 19) argues that,

‘tropicality, development and vulnerability form part of one and the same essentialising and generalising cultural discourse that denigrates large regions of the world as disease-ridden, poverty-stricken and disaster-prone’.

This discourse portrays inhabitants of these regions as being incapable of removing themselves from danger and subsequently privileges ‘first world’ knowledge and expertise as the solution to their hazard risk (Pelling, 2003).

Feminist researchers have also contributed to the field of political ecology, reshaping the ways in which researchers and practitioners think about women, development and the environment (Nelson & Seager, 2005). A feminist political ecology framework seeks to understand and interpret local experiences within the context of global processes of change (economic, environmental, political) (Rocheleau et al., 1996). It does this by

treating gender as a critical variable which in interacting with other aspects of identity shapes ‘processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods and the prospects of any community for “sustainable development” ’ (Rocheleau et al., 1996: 4). According to Thomas-Slayter et al., (1996), it provides an approach which derives theory from practice and therefore avoids the pitfalls of maintaining a distinction between theory and practice.

A political ecology framework is used in this thesis to examine conceptualisations of disasters in Samoa, and provides a space for alternative understandings of hazard risk and disaster experiences, while simultaneously exploring the inherent political connections between development processes and hazard risk.

Feminist Theory

Feminist Development Theory

Critiques of ‘western’ feminist development research

In recent decades, feminist development research has come under increasing scrutiny and criticism from both ‘western’ and ‘third world’ academics. First world feminist’s portrayal of ‘third world’ women as ‘victims’, oppressed with no agency for change provided a space where they could exist as ‘privileged recipient(s) of First World concern’ (Mohanty, 1988; Ong, 1988; Minh-ha, 1989; Radcliffe, 1994; Smith, 1999). Feminist research which evolved out of second wave feminism in the 1970s prided itself in being more ethical than other traditional research methods. Therefore the critiques were both ‘a major stumbling block for feminist theorizing and the test of its ultimate validity’ (Lazreg, 2002: 123). Such a situation can become highly problematic because ultimately ‘they’ (third world women) are there for ‘us’ (western feminist academics) and it is ‘our’ interpretation of ‘their’ lives that gets conceptualized and published (Lazreg, 2002).

Enabling Feminist Development Research: Poststructuralist Feminist Theory

Over the past 10-15 years, partly as a consequence of the growing criticism of 'western' feminist development research, close attention has been paid to the politics of knowledge production and epistemology. Such explorations of methodology have led researchers to a greater awareness of the ways in which their positionality, power and other aspects of their identity impact on knowledge production (for example, see Kobayashi, 1994; Weedon, 1997).

Feminist epistemology and methodologies were both crucial underpinnings for my research process. Feminism challenges traditional epistemologies of what constitutes valid knowledge, thus redefining the knower, the knowing and the known (Harding, 1987; Moss, 1993). According to Madge et al., (1997: 87) feminist epistemology,

'questions notions of 'truth' and validates 'alternative' sources of knowledge, such as subjective experience. Feminist epistemology stresses the non-neutrality of the researcher and the power relations involved in the research process'.

Feminist poststructuralist theory provides valuable insights into the production of social meanings and subjectivities. Building on the work of Derrida, this theoretical approach sees meanings as fluid and temporary. According to Weedon (1997: 25) social meanings are produced...

'within social institutions and practices in which individuals, who are shaped by these institutions, are agents of change, rather than its authors, change which may either serve hegemonic interests or challenge existing power relations.'

Just as context as important in terms of social meanings, forms of subjectivity are also produced historically and change with shifts in the discursive fields which constitute them. Consequently feminist post structuralism decentres the rational subject of humanism, seeing subjectivity and consciousness as socially produced in language. In such a context, that the individual is always the site of conflicting forms of subjectivity

(Weedon, 1997). This approach suggests that experience has no essential inherent meaning. Rather, as Weedon (1997: 33) explains, experience ‘may be given meaning in language through a range of discursive systems of meaning which are often contradictory and constitute conflicting interests’.

Feminist theory therefore has implications in terms of the conceptual framing of research, the questions asked, the methods employed, the ways in which research is written up and the knowledges produced. In accordance with these principles my research attempted to be guided by my research participant’s life experiences and their understandings of disasters and development. This chapter will outline the ways in which feminist theory underpinned decisions I made about research methods and the relationship between me, my participants and the knowledges produced.

Methodological Approaches and Obstacles

Data Collection

This thesis is based on ethnographic research undertaken in Samoa during October-November, 2006 and analysis of secondary material including maps, reports and historical documents. Four and a half weeks were spent in Sapapali’i village on Savai’i Island, while another two weeks were spent in Apia, the capital of Samoa, where interviews were undertaken with government departments, and regional and non-governmental organisations.

Qualitative research methods were chosen for this thesis. According to Sanga (2004) qualitative research methods are more appropriate for Pacific research because they better serve the methodological purposes of Pacific research. According to Sanga (2004: 48):

'[a] key purpose [of Pacific research] is the ability to obtain rich contextual details. As well, research must adequately stress process considerations and be able to capture realities as they unfold...the active participation of insiders is integral to indigenous Pacific research. This allows for multiple realities to be captured, particularities to be spotlighted and each 'voice' to be heard.'

Qualitative research methods were also chosen because previous research on disasters in the Samoa (and throughout Polynesia) has largely used quantitative methodologies and therefore a valuable contribution could be made to this body of literature using qualitative methods. Qualitative methodologies were also conducive to my theoretical underpinnings of this research which was a focus on the social construction of disasters (rather than traditional 'scientific' understandings of them as 'natural' events which lead to studies of the 'natural' factors that impact on disasters rather than the social factors). As Blakie et al. (1994: 3-4), state:

'[t]here is a danger in treating disasters as something peculiar, as events which deserve their own special focus. By being separated from the social frameworks that influence how hazards affect people, too much emphasis in doing something about disasters is put on the natural hazards themselves, and not nearly enough on the social environment and its processes.'

Villages on Savai'i adhere more strictly to *fa'a Samoa*, than those on Upolu so I saw my fieldsite location on Savai'i as an advantage, largely because I was interested in potential differences between *fa'a Samoa* approaches to disaster management at a village level and approaches taken by national and regional organisations in Apia. The location of my fieldsite was also largely the result of one of my undergraduate students having a connection with the pastors in the village, rather than an active decision to choose Sapapali'i. This connection provided relatively easy entry into the fieldsite as the status of my hosts meant that I was freely accepted into the village.

The majority of my research data came from semi-structured interviews that I conducted with participants in Sapapali'i (see Appendix One for an outline of interview questions). As well as undertaking interviews I also collected data through taking part in daily village activities (church services, bingo, *to'ona'i* and weaving groups). I took detailed notes of

my experiences and observations as fieldnotes in a diary. These provided me with an opportunity to record my perceptions of everyday experiences as well as a chance to reflect on my positionality in my research. Numerous informal conversations took place at these events which also contributed to my research themes while also providing additional contextual understandings which were invaluable given that this was my first time in Samoa. I also made sure that I watched the local news and read the national newspaper (the *Samoa Observer*) whenever possible. This gave me an additional understanding of the social, economic and political situation in Samoa.

I also undertook interviews in Apia (see Appendix One for a list of central interview questions). Two interviews were undertaken with Women and Business Development (WIBD). An initial interview was undertaken with Karen Mapusua when I first arrived in Samoa and a second interview was undertaken with Adimaimalaga (Adi) Tafuna'i after returning from Sapapali'i. I interviewed Tala Mauala, the secretary general of the Samoan Red Cross during my first week in Samoa and on my return from Sapapali'i visited again to pick up disaster management/promotional resources and documents. I also met with Dean Solofa and Taito Nakaleve who work for the climate change team at SPREP. I undertook an interview with them and also collected a number of policy documents and promotional materials. I was unable to meet with Filomena Nelson, the disaster co-ordinator from the MNREM, so sent her questions via e-mail after my return to Samoa. The involvement of these participants did not end when I left Samoa. I have maintained contact with each of these participants and sent further questions/discussion points as questions emerged during the analysis/writing up stage of my thesis.

Interviews were conducted with nine women and men in Sapapali'i village and one from a neighbouring village, who had grown up and had continued association with Papa village on the Falealupo Peninsula in western Savai'i which was the area most severely affected by Cyclones Ofa and Val in the early 1990s. Some of these men and women had grown up in the village, while others had moved to the village through marriage. In Samoa, women traditionally move to the village of their husband, while men traditionally

stay in the village of their birth. This is of course changing with increasing numbers of people moving to Apia for employment and the growing availability of freehold land.

Each participant was interviewed between one and four times and interviews were conducted in English or in Samoan with the use of a local translator (who was also one of my participants). There were different reasons why some people were only interviewed once while others were interviewed multiple times. These reasons included: the age of participants, the stage at which I met the participant, willingness to participate, and time and availability (particularly for participants who had employment commitments during the week).

There was a great diversity in the characteristics of my participants in Sapapali'i, (and my participant from Salelavalu). Six were women and four were men and they varied in age from approximately 25 to 80 years old. Their levels of educational achievement also varied greatly. Some participants held prominent positions in the village including *matai* titles, church deacons or store owners, while others were untitled members of the village, many of whom had no formal employment. Although living in the village would class all participants as rural, some participants travelled to Apia for work or to spend time with their children (some of whom were attending secondary school in Apia) and therefore were both rural and urban men and women. The majority of participants had children (and some also had grandchildren), with the exception being a couple of the younger participants in my research.

Selection of participants was largely dictated by my hosts who were the pastors of the village. On the first Sunday after my arrival in the village the pastor introduced me to the congregation at the evening church service. On one level I was extremely grateful for this gesture as it meant that most people in the village were now aware of who I was and why I was staying in the village. At another level, however, I was concerned with what exactly he said to the people, particularly given the pastors ability to command people to do things. As Francis (1992: 89) states: 'The importance of the process of introduction to the respondents and how the introducer is 'perceived within the community' is connected to

power relations'. As the introduction was in Samoan I couldn't understand exactly what was being said but afterwards the pastor told me that he had asked people to be willing to take part in my research if I approached them. I didn't want people to be forced into taking part in my research and was slightly concerned that this might happen because people would be afraid of the consequences if word got back to the pastor that they had refused to take part.

The participants chosen for me by my host family also tended to be predominantly 'professional' people. In order to get a more even spread of people from the village I also recruited participants through informal channels including people that I met at the village store or while walking around the village. In some instances participants would recommend other members of their family or friends for me to approach for interviews and this was a valuable way of gaining participants quickly given the time constraints of my research.

Participants were asked where they would like their interview/s to take place as I was conscious of the implications of the location in which interviews take place (Elwood & Martin, 2000). According to Elwood and Martin (2000) allowing participants to make a decision about where interviews will take place may give them a sense of empowerment in the research process. Most chose to be interviewed in their fale, while one was interviewed in my fale and a few took place at workplaces (i.e. local store). It was also important for me, if possible, to undertake interviews away from the pastor's property. This was because I was conscious of the impact such a location may have on the participant's willingness to open up, especially as some participants were critical of the role of the church and/or fearful that what they said might get back to the pastors.

Before undertaking interviews I gave my participants a chance to look at the interview questions/topic lists so that they could modify them if they wanted. This was partly to ensure that my research was relevant and useful to the community in which it was being undertaken. I also wanted to undertake research in the most culturally appropriate way. According to Samoan researcher Tupuola (2000 in Sanga, 2004: 48),

'the design of research involving Samoans must take into account the relational aspects of the participants and the researcher [also], participants should have a say in what the research questions should be'

Interviews were recorded on a digital voice recorder and lasted between forty-five minutes and three hours. I used a semi-structured format which allowed me to have a general interview direction with key questions, while also allowing for the flexibility and unpredictability of the interview process, so that the interview direction could largely be determined by the participant. This flexibility allowed me to gain a richer body of information from the interviews and was also important given my relative lack of knowledge of the Samoan context of the issues I was exploring. I had to be careful not to shape my research questions around the discourses of gender and disasters from my cultural context (or that of research from other regions of the world) and instead be open to the connections that my participants made between these themes. My participants were the experts on the issues and as much as possible I allowed them to talk without interruption. I only interrupted interviews where certain issues needed clarification or when there were key questions that I needed to ask.

As additional interviews were undertaken with some participants, they became more like informal discussions between friends rather than formal meetings as greater rapport was established. For this reason, it was often my later interviews in which I got my most insightful data. Given that this was my first overseas field experience it was also likely to be a result of my increasing confidence in my interview techniques. Some of the women I spoke with thanked me for allowing them to take part in my research as it had given them a chance to share their thoughts and talk about their lives, something many of them got little chance to do. Scheyvens and Leslie (2000) have also noted the way in which some cultural contexts can make women feel that their lives are not worth talking about (see also, Pratt & Loizos, 1992).

The Language of Research

'The language that is used influences who can speak, who is heard, and the nature of the understandings that are produced.' (Watson, 2004: 60)

An additional challenge posed by my research methodology was addressing potential language barriers between me and my participants. The subject of language learning and its importance in fieldwork by geographers has received very little attention until recently (Watson, 2004). Recent exceptions are the writings of Smith, 1996; Gade, 2001; and Veeck, 2001). According to Gade (2001: 370) geographers have written 'little about either how they dealt with language apprenticeships or why they chose to work abroad and what kinds of experiences they had there'. Interest in the role of language more generally in geography has emerged in a debate in *Environment and Planning D* (2000 & 2003), however, this focused more on the dominance of the English language in journals and meetings than the language of geographical practice in the field (Watson, 2004).

Prior to departing for Samoa I spoke with various people about whether I would need a translator for my fieldwork. Given the time constraints on my research it was not possible to learn Samoan before undertaking my fieldwork (beyond a few basic phrases). I received mixed messages; some people reassured me that almost everyone would be able to speak English, while others were insistent that I would need a translator for interviews. I therefore left for Samoa open to either possibility and assured that there would at least be a few people in the village who could act as translators if needed.

In fact, my experience of fieldwork in Samoa fell somewhere between these two realities. Some of my participants spoke English well, while others spoke no more than a few basic words. Interviews with officials in Apia were all undertaken in English, while in Sapapali'i I undertook interviews either in English (the majority of interviews), or in Samoan, through a translator.

When I first arrived in the village I was told by my hosts that there was a girl in the village who would act as my translator. They took me to meet her and we got to know

each other and I discussed my research and what she would have to do as a translator. As the research progressed she continued to be unable to act as a translator, sometimes due to family circumstances beyond her control, and other times there was no explanation, she simply didn't turn up.

Because of the lack of a translator in the first weeks of my research I was directed towards people in the village who spoke English. Although this was helpful for my research, I was aware of the fact that these people tended to be more highly educated and as a result I wasn't getting a good cross-section of people in the village. Language use is highly political and as Watson (2004: 63) warns, using a language such as English may 'exclude people such as women and more marginalized people, who are unlikely to have benefited from learning these languages'. I also found a new translator, Matalena. She was one of my main participants and was keen to practice her English and part of a weaving group that included women who wanted to take part in the research but only spoke Samoan.

When discussing language in research it is commonly asserted that it is a disadvantage to not speak the language of your participants: it creates a greater distance between you and your participants; and through translation you lose the subtle nuances and thus much of the meaning of what is being said. According to Twyman et al. (1999: 314), 'language plays a central role in the construction of meaning, which may be lost through translation...thus misrepresenting the views of the researched (Spivak, 1993)'.

There were definitely times when I felt that not being able to speak and understand Samoan was a major disadvantage. Although language learning 'doesn't provide membership of an authentic community, or automatic understanding of a community's varied experience', it 'may be a step towards shifting the balance of power between researched and researcher, and may help generate insights that could otherwise be ignored' (Watson, 2004: 59). However, it is also important to acknowledge Smith's (1996) argument that the relations of the researcher to research in the 'home language' (e.g. English) reveal similar processes of interpretation and de/re/construction. According

to Smith (1996: 163), ‘the problematisation of language and meaning applies to research in ‘home’ and ‘foreign’ languages since both involve interpretation and appropriation’.

The difficulties of undertaking research through translation do not end once the interviews have been conducted. Researchers have also been aware of the ways in which through the act of translation we:

‘understand other cultures as far as possible in their own terms but in our language, a task which ultimately entails the mapping of the ideas and practices onto Western categories of understanding’ (Tambiah, 1990: 3, in Sturge, 1997: 21).

But, rather than seeing this process of mapping as creating problems of ‘authority’, we should instead see it as a process where the theory and practice of translation can come together in a reflexive manner, allowing for an exploration of this hybridity in order to open up what Smith (1996: 163) calls ‘new spaces of insight, of meaning which displace, de-centre the researcher’s assumption that their own language is clear in its meaning’.

Data analysis

Interviews from Sapaali’i and Apia were transcribed while I was still in Samoa. This was done for a number of reasons including providing my participants with an opportunity to check over transcripts and allowing me to follow-up on any issues that were raised in previous interviews. It was also much easier to transcribe interviews while they were still fresh in my mind, especially as the quality of some recordings was quite poor due to background noise (chickens, dogs, children, weed-eaters, passing traffic etc.).

Participants were given an opportunity to read over their transcripts and check them for accuracy. In the case of the interviews undertaken in Apia it was important to ensure that I was accurately depicting the views of the organisation. The checking of interviews by participants while in Samoa was particularly valuable given that although most of the interviews took place in English, they would sometimes use Samoan words (where there

was no English equivalent). Checking transcripts allowed me to ensure that I had correctly spelt the word/phrase and properly understood its meaning.

On returning from Samoa, interviews were analysed using qualitative methods including open reading of interview transcripts and coding. Coding involves reviewing transcripts and fieldnotes in order to identify key themes that appear to be of theoretical significance to the research. This involved multiple readings of the transcripts and fieldnotes in order to collapse codes into a more manageable number of key thematic areas which I organised both by subject and by stance. I used positive coding to represent quotes or ideas that related to the research themes I had identified and negative coding to identify where there were gaps in the information (Davidson & Tolich, 1999). In the interviews undertaken with officials in Apia I was able to follow-up on some of the gaps in interviews via e-mail. As Bryman (2001: 392) states, '[c]oding in qualitative data analysis tends to be in a constant state of potential revision and fluidity'. The nature of this process meant that my writing and analysis were closely connected so that many of my key themes and findings only emerged as I was writing my thesis.

Grounded theory was also an important element of my writing/analysis process. Grounded theory argues for an inductive approach to research, where a hypothesis and the theoretical ideas are developed from the observations made about the data that is generated (Glaser & Strauss, 1968; Marshall, 1998; Bryman, 2001). Therefore the key themes that emerged from my interviews provided me with the structure for my thesis chapters and as a result my final thesis differs markedly from the ideas I had before undertaking my research. A grounded theory approach also allowed me to identify when my research confirmed and/or conflicted with the international development and disaster literature. Although this method required a greater flexibility in the structure of my thesis and the direction my writing took, it allowed a greater level of connectedness between my research and the theory/literature underpinning it which was a definite advantage over more 'scientific'/'positivist' approaches to thesis writing.

Data analysis included the use of feminist theory, which argues that people know as much (probably more) about their lives, and the meanings they live with, as do those who attempt to study them. When writing up the research, respondents' own words were used by integrating transcript material into the analyses and explorations of key themes. Feminist methodology also insists that research findings are interpreted within the context of the cultural framework of the research community, within its own autonomous systems of values, behaviour, attitudes, sentiments and beliefs. Political ecology approaches to disasters, which were outlined earlier in this chapter were also fundamental to my analysis of research data. This approach allowed me to explore the multiple discourses that people used to make sense of disasters and to understand the intersections between development processes and disaster risk, both of which were crucial in terms of developing the key themes for my chapters.

Pseudonyms were used in my research to conceal and protect the identity of my participants. Although pseudonyms conceal the identity of my participants, given the size of the village and the prominent positions that some of my participants held within it, it would be possible to identify some of the participants if you were familiar with the village. In some instances I have therefore removed additional identifying features of participants in an attempt to reduce the chances of this happening.

Positioning myself in my research

Although the research process can never be transparent 'it is important to continue to make our best efforts to uncover the mechanisms of truth claims we produce'...through the 'social and political processes of academic knowledge construction' (Dyck, 2002: 244)

As researchers we need to acknowledge the position from which we ask our questions and make our research interpretations by using reflexive research methodologies which bring the researcher into the text and highlight the ways in which the researcher's positionality impacts on their research. According to Kobayashi (2005), recognition of

positionality is one of the most “useful” analytical concepts of the past decade or so, but there have been increasing critical debates within feminist geography on the concepts of reflexivity and positionality and their usage (Rose, 1997; Kobayashi, 2004). As Kobayashi (2005: 36-37) emphasises,

‘to recognize the mutually transformative nature of one’s positionality in relation to a particular material situation does not in itself, however, set the terms of that situation...No matter how difficult the struggle to reach a particular position, to occupy a particular space, the power to situate always represents a form of privileging’.

Through reflexive processes there is a tendency to hold on to standpoints once they are established, even if by doing so the research goes against the concept of transformative situation (Kobayashi, 2005). However, although acknowledging my positionality can not remove the power relations embedded in my research I still believe that reflexivity is important in terms of understanding the relationship between me and my research and the ways in which it impacts on my production of knowledge.

Undertaking my fieldwork in Samoa, I was aware of the way I was positioned as a *palagi* (white) researcher, and the potential implications of my decision to undertake cross-cultural research in Samoa. I had no prior connection to Samoa, and had very little interaction with Samoans while growing up in New Zealand.

This lack of understanding, and a desire to start to understand, was part of my motivation for choosing Samoa as the site for my research. I hoped that beyond my thesis work, my time in Samoa would provide me with a cultural context for understanding Samoan issues in New Zealand. The Pacific is in many ways our ‘backyard’, and I therefore felt it was more meaningful for me to undertake research in an area where New Zealanders can make a valuable contribution in terms of development. Being a New Zealander also positioned me in certain ways as a consequence of the historical relationship between New Zealand and Samoa, including the period of colonial rule by New Zealand and the implications of this in terms of power relations. More recent relationships between Samoa and New Zealand provided positive starting points for fieldwork with many Samoans

wanting to discuss rugby and tell me stories about visiting relatives living in New Zealand.

This was my first trip to Samoa and therefore I had little previous knowledge of Samoa and Samoan history and culture beyond the readings I had done in the months preceding my departure. In some ways this ‘newness’ meant that I had very few preconceived ideas of what life in Samoa was like and therefore my research wasn’t mis/guided by previously held understandings or discourses of Samoa. However, in the eyes of many of my friends and family I had chosen an idyllic fieldsite of sand, sun, and palm trees, and I cannot deny that these perceptions of Samoa did make up part of the image I had in my head as I set off for my research.

Once in the village I realised that I was not only positioned as a *palagi* outsider, but also as a researcher from a university which further distanced me from many of my participants. I was noticeably different from my participants because of my skin colour and as the only *palagi* in the village it was difficult not to be noticed while walking through the village. I became aware not only of this difference but how this difference was perceived by others (Sundberg, 2003).

However, positioning is not as simple as the binary notion of ‘insider/outsider’, and recent debates within geography have lead to increasing criticisms of the concept and sought to provide new ways of understanding difference. Personal relations of the researcher/ researched dynamic are not reducible to a simple insider/outside dimension (Miles & Crush, 1993) and sharing a characteristic such as skin colour or gender is not necessarily enough to establish an open research exchange (Dyck, 1997). As Rose (2001) emphasises, the uncritical use of the notion of ‘insider’ brings with it the danger of essentialism.

There is an increasing acknowledgement by researchers that these identities and statuses can be fluid, even in within a single research project. Within a single interview, the degree of connection between researcher and researched can vary depending on the topic being discussed at the moment (Dyck, 1997). Not only are participant’s identities

multidimensional but our own identities as researchers can appear multidimensional to our participants. As Dyck (1997: 198) explains,

'[t]he researcher may represent, for instance, relations of oppression, the 'expert' knowledge of an academic institution, a woman with children with some common interests, or a person with whom concerns can be talked about in a safe environment beyond the networks of local knowledge'.

Certain aspects of my positionality helped me to develop rapport with my participants. For some of my participants who had been to university, the fact that I was a student was a point of commonality which we could discuss.

Although there were commonalities that could be found between me and my participants, I was also aware of the ways in which I was positioned as an 'outsider'. But, being positioned as an 'outsider' doesn't have to be a disadvantage in research (Scheyvens et al., 2003). In some situations there may be advantages in being an outsider in that participants are often more willing to talk to you and open up in interviews. My difference was also a common topic of conversation with my participants who were all very interested in what life was like in New Zealand and why I had chosen to come to Samoa to do my research. Similarly, Macintyre (1993, in Scheyvens et al., 2003: 153) found in her research that the differences that existed between her and the women with whom she lived, created a bond between them whereby '[her] interest in their lives was matched by their interest in [hers]'.

Certain aspects of my identity led to challenging situations in the field. Prior to undertaking my fieldwork I perceived my sexuality to be nothing more than a minor problem that would easily be solved by 'playing it straight'. However, as my fieldwork progressed I was constantly aware of the numerous impacts it was having on my research and maintaining multiple identities became an increasingly exhausting, confusing and painful process. Although this was an issue that was never completely resolved, and a more detailed exploration of the issue of sexuality in the field is beyond the scope of this thesis, it did illustrate the conflict that can exist in the identity of the researcher in the field.

In an attempt to get through the situation I initially attempted to separate ‘Beth the researcher’ from ‘Beth the person’. Although doing this conflicted with my personal beliefs and research philosophies it seemed to be the easiest way of ‘getting on’ with the research. Since returning from the field and having more time to reflect on my experience, I came to accept that my personal experience of hiding my sexuality was not something to hide, but part of the richness of the research experience. Bringing such experiences out into the open ultimately helps broaden the debate about reflexivity in fieldwork by problematising aspects of our identities as researchers which have traditionally been assumed to be uniform. I am still unsure about whether I would disclose my sexuality to participants if I was to do my research in Samoa again. However, the process of reflexivity and the explorations of our sexuality as researchers, allows us to examine the multiple ways in which it impacts on our research, without paralysing ourselves in our fieldwork. In fact, my research experience showed that research paralysis was far more likely to result from assuming that my sexuality wouldn’t matter in the field, than dealing with the fact that it would; and it was only with time and reflection that I realised the impact it was having and was able to move forward.

It is also important to acknowledge that not only do we position ourselves in our research but we are also positioned by our hosts and participants. Although with time I began to see myself as more of an ‘insider’ because I was living with a family and taking part in everyday village activities, I was constantly reminded by my participants, in different ways, that I was an ‘outsider’. Our identities in the field are never fixed and as Blackwood (1995: 55) states: ‘[in the ethnographic research] we occupy multiple positions and identities that transform over time, forcing us constantly to reconstruct who we are in relation to the people we study’ (see also Watson, 2004).

Ethical Considerations

Ethical considerations are fundamentally important when undertaking research, particularly in development research which involves additional power gradients between the researcher and participants. There is also a historical legacy of unethical research by ‘first world’ researchers in the regions of the world which can often mean that people are more sceptical of researchers and their research intentions.

Human Ethics Committee

Before undertaking my fieldwork in Samoa I had to apply to the University of Canterbury Human Ethics Committee (HEC) in order to gain permission to proceed with my research. This is a standard procedure for research which involves human subjects. According to the university’s HEC ‘Principles and Guidelines’, the aim of this process is to ‘review proposals for research and teaching exercises that involve human participants, in order to ensure that this work is conducted with appropriate regard for ethical standards and cultural values.’ (University of Canterbury Human Ethics Committee, 2006). I was granted ethics approval which gave me permission to undertake my research.

A major issue for human ethics committees is the issue of informed consent, particularly in fieldwork like mine which was cross-cultural and being undertaken in a developing country. I was obligated by the HEC to present participants with information sheets (in Samoan or English) (see Appendix Three) and gain written permission from participants in the form of signed consent forms (written either in Samoan or English – depending on the context) (See Appendix Two). I was however, also aware of the Samoan cultural context in which trust and confidentiality were more likely to be established through methods different to the HEC guidelines. According to the Pasifika Education Research Guidelines (Ministry of Education, 2001):

'The protection of confidentiality occurs more by the establishment of confidence and trust between the interviewer and the interviewee, than by the mere signing of written ethics consent forms'

Samoa approaches to research are similar to Kaupapa Maori research and are based on *fa'a'aloalo* (respect) towards participants. Cultural processes which shape research include: *fealofani* (goodwill), *alofa* (compassion), *loto maualalo* (humility), and *momoli* (to assist/to express solidarity) (Filipo, 2004). It was these principles and the discussions that I had with people in Samoa that guided the way in which I considered ethical issues in the field, rather than my obligations to the process I had outlined in my HEC application.

After my reading and discussions with other people undertaking research/implementing programmes in Samoa it seemed inappropriate for me to gain consent through the signing of forms by my participants. Consent forms seemed 'sterile transactions' which would be more likely to emphasise the distance and power differentials between me and my participants, rather than serve as a symbol of trust and protection. Also, some of my participants had low levels of literacy and it would therefore have been inappropriate for me to ask them to sign a written document. Instead I chose to spend time with participants allowing them to get to know me at a personal level (and vice versa) before talking to them about my research and their rights and protection as participants if they chose to take part.

Although it is crucially important to consider ethical issues before undertaking fieldwork which involves human subjects, human ethics committees have come under increasing criticism for their inability to appropriately address qualitative research. The approach taken by most human ethics processes is based on 'epistemological assumptions aligned with positivistic research, and does not fit the qualitative research process' (Tolich & Fitzgerald, 2006: 71. See also, Bradshaw, 2001; Marshall, 2003). Human ethics committees assume that the researcher can 'know' how research will progress and predict what issues will arise prior to undertaking research; yet the fluidity of qualitative research and the agency of participants in the field means that there is a large element of

‘unknown’ about the research process at the time of the HEC process (McDowell, 1992; Rose, 1997; Fitzgerald, 2005).

This then leads to the pertinent question raised by a number of researchers including Fitzgerald (1994: 4):

‘Are we writing research proposals and ethics committee applications that are acceptable according to the standards and values of ethics committees rather than ones that are ethically responsible to all the participants in the research...Have ethics committees become barriers to responsible research rather than safeguarding the welfare of the people involved?’

A discussion of ways forward in order to make the ethics process more relevant and valuable to the researcher and their participants is beyond the scope of this section (for suggested ways forward see Tolich & Fitzgerald, 2006). It is however important to at least acknowledge the shortcomings of current human ethics procedures in order to be aware that ethical decisions do not stop once permission has been granted by the committee. Ethical considerations are constantly negotiated and addressed in the field and the ways in which your research plays out in the field and the methods you employ to safeguard your participants may differ from your HEC application. However, it is important to acknowledge that the differences between HEC obligations and research practice are not the result of deceitful practices by the researcher but a reality of the fluid nature of ethnographic research.

Reciprocity in Research

Before leaving for Samoa I discussed issues of reciprocity with people who had undertaken research in Samoa and Samoans living in Christchurch. Although I knew that it was important to be able to give something back to my participants, I was aware that the most appropriate ways of doing this were are culturally and context specific. I was also aware that in some contexts it is not appropriate to give gifts and some academics have argued against the practice (e.g. Bleek, 1979). Samoans living in New Zealand, and academics who had undertaken research in Samoa who I spoke with, suggested that small practical gifts such as food, t-shirts, tea towels/pegs would be greatly appreciated and that

it was appropriate to give a small amount of money to any *matai* that I spoke with. I also decided that it would be nice to be able to them something meaningful from New Zealand, so took pounamu pendants/jewellery and other small souvenirs with me.

I had initially intended on having a morning or afternoon tea prior to my departure where I could invite along my participants and other members of the village who had helped me with my research. Once in the village I realised that this was not a practical way of thanking people because it would be extremely difficult to find a time that suited everybody and that many of my participants had children and/or grandchildren to look after, or jobs that they couldn't get away from. The more I thought about the logistics of arranging such an event, the more I realised that it was not an appropriate (or easy) way of thanking people.

Instead I chose to spend my last two days in the village going and visiting my participants at times that suited them. While in Samoa I had done a lot of baking for my family so I decided to take scones and pikelets to my participants as well as my gifts that I had brought with me from New Zealand. Thanking participants was an extremely humbling part of my research, especially as each of my participants gave me farewell gifts. This was something that I had not expected. Filipino (2004: 181) explains the Samoan cultural context of *mea alofa* (gifts, food, resources, money/funding presented as a sign of appreciation and gratitude):

'some participants may also wish to reciprocate their appreciation for being involved in the research that they also present an exchange of mea alofa. This is a humbling experience, but must also be accepted, even though this maybe unexpected by the researcher. This reciprocity of gifts and other items is an expression of how each party recognise their shared relationship'

The group of weaving women with whom I spent a lot of time put on a farewell lunch for me and gave me numerous presents. On reflection the research was not just reciprocal through the exchanging of gifts that took place at the end of my research. Many of my participants invited me to come back and visit them, even after I had finished my interviews with them. Although this took up extra time and meant that I was not able to

undertake as many interviews as initially planned I realised that it was a way in which I could give back something to my participants in the form of time, and a listening ear. My participants enjoyed telling me about their lives and also asking me about life in New Zealand.

Reciprocity in research also involves aspects of the research methodology (some of these issues are addressed in the data collection and data analysis section of this chapter). I had always intended to give my research back to the community and had requests from some of my participants for a copy of my thesis once it was completed. I intend to return to Samoa and visit my participants in Sapapali'i so that I can share my research with them. I intend to make a small presentation and have a handout for participants which summarises my research findings.

Conclusion

Successfully undertaking qualitative research requires the researcher to be open to constant re-negotiation and fluidity within the research process. This chapter has outlined the central elements of my research methodology including methodological and theoretical issues associated with undertaking development fieldwork. It is by no means a complete exploration of the research process but provides an overview of the key research methods and issues which arose. I have combined interviews and other ethnographic techniques with secondary data to undertake this research. It is also important to acknowledge difficulties faced when undertaking fieldwork including the way my positionality impacted on the research process and the knowledges produced. The negotiation of power relations is inherent in social research, particularly in a cross-cultural context. Although this doesn't have to be seen as a drawback, it is important to explore the ways in which it is manifest in the research process.

Chapter 3: The Gendered Disaster Experience

“men are concerned with the houses, strengthening up the houses, getting the lights and the candles and the lanterns ready. Women are more concerned with getting the foodstuffs ready and seeing if there is water and stuff like that...women are concerned with food and the clothes and the people, the older persons and the kids, and men are involved entirely with the physical, the preparedness of homes and the hard stuff” (Tufi)

Introduction

Gender is a crucial axis in disaster experiences. Exploring the ways in which gender relations, roles and identities are re-worked or maintained during disaster events helps to understand the ways in which hazard events differentially impact on individuals. As previous chapters have argued, in order to understand the ways in which gender intersects with disaster experiences, we need also to consider the broader context of gender roles and relations in Samoa. If understandings of, and approaches to, disasters are to move beyond the event itself to be placed within broader development, then we need to consider the ways in which everyday life is organised around particular understandings of gender, in order to ensure that broader vulnerability reduction initiatives are appropriate to Samoan conceptualisations of gender.

This specificity reinforces the need to produce locally-specific understandings of the intersections between gender and disasters, rather than applying blueprints from other regions which are not appropriate in the context of Samoa or the Pacific. As the following extract from the poem ‘On Being Samoan, On Being Woman (E au pea Ina’ilau a Tama’ita’i⁶) by Laufata Simanu Klutz implies, gender identity is culturally specific, however, gender identity is also fluid and normative understandings of Samoan ‘femininity’ and ‘masculinity’ have changed over time.

⁶ The Samoan woman’s place is guaranteed; she will always achieve her goals

“Whose eyes shall we look through, sistah?
 The woman’s libber . . . the bra burner,
 Or the mother with droopy tits and snotty-nosed kids
 In a beeline to the beach looking for pipi?
 Or the chief’s wife with siapo for her ma’i,
 climbing and thatching and securing the
 Ina’ilau a Tama’ita’i, the woodwork for being
 Samoan and
 Woman!...

We, the *Tamaitai*
 We, the *taualuga*
 Have perched our breasts at the rooftops
 Basked in the sun; the leaves around our waists
 rustle in the breeze.
 We shout: Our Tautua, our Pule!
 Our Service, our Power of being
 Samoan, of being
 Woman!”

Although men and women do not fit neatly into these hegemonic constructions of masculinity and femininity, these gender ideals were evident in discussions with participants of what it meant to be a Samoan man or a woman.

Gender identities intersect with other identities and processes to result in multiple disaster experiences. Not only do disaster experiences differ between people, but it is also possible for individuals to adopt multiple subjectivities, prioritising different identities and discursive positions in different situations (Weedon, 1997). It has been argued that gender aware disaster scholarship needs to move beyond stereotypical and normative understandings of masculinity and femininity if it is to be of value to communities and individuals (Fordham & Ketteridge, 1998). Rather than essentialising the gendered disaster experience we need to be aware of the fluidity of identities and the multiple discursive positions survivors employ. Just as the experiences of disasters vary across the globe, the experiences of men and women vary too. It is also important to emphasise that there is no single ‘woman’s experience’ or ‘man’s experience’ in a disaster.

Until recently, little work had been undertaken to explore the gendered dimensions of disasters, even though it was widely accepted that women tend to suffer greater levels of vulnerability in natural disasters than men and that gender shapes the social worlds within which natural events occur (Blakie et al., 1994; Myers, 1994; Enarson & Morrow, 1998; Delaney & Shrader, 2000; Enarson, 2000; UNDAW, 2001). It is also known that due to their proactive behaviour in the protection of well-being of their households, their involvement in community activities, neighbourhood and school education, and disaster preparedness programmes, women are key actors in environmental management and natural disaster mitigation. However, women are still not fully involved in planning and decision making processes in these areas and there is very little research on women's experiences of disasters in the Pacific (UNDAW, 2001) (see South Pacific Disaster Reduction Programme, 2002 for an example of Pacific work on Gender and Disasters).

The Yokohama World Conference on Natural Disaster Reduction (1994), a mid-term review of the International Decade for Natural Disaster Reduction, placed greater emphasis on the role of social sciences in research, policy development and implementation and emphasised the links between disaster reduction and sustainable development. It also recognised the need to stimulate community involvement and empowerment of women at all stages of disaster management programmes as an integral part of reducing community vulnerability to natural disasters. However, gender differences in disaster mitigation have been addressed mainly in the context of vulnerability or community involvement. Women's abilities to mitigate hazards and prevent disasters, and to cope with and recover from the effects of disasters which do occur have not sufficiently been taken into account nor developed (UNDAW, 2001).

This chapter explores the relationship between disasters and gender relations and identities in Samoa. The first section of this chapter provides a context of the cultural construction of gender in Samoa. This emphasises the ways in which gender identity is mediated by cultural understandings of the 'roles' of men and women. The second section of the chapter explores the gendered disaster experience focusing on the multiple subjectivities adopted by women and men when recounting these events. The chapter

concludes with a synthesis of the key themes emerging from the chapter. Most participants included in this chapter lived in Sapapali'i, but the discussion does include experiences of a small number of men and women who lived outside of the village and interviews with officials in Apia when discussing gender and national disaster management.

The Samoan Context: Normative constructions of gender identity

'E au le inailau a tamaiti' – 'The ladies' row of thatch was complete, but the gentlemen's row of thatch was incomplete'. This proverb is from the legend about the building of Tautunu's house (he was a chief from Falealupo). Tautunu asked the people of Falealupo to build him a house. When the house was complete, the *tufuga* (master builder) called on the men and the women of the village to thatch it. This was unusual because thatching a roof is usually the work of men. The *auluma* (women) and the *aumaga* (men) of the village started thatching. Although they started at the same time, the ladies' row of thatching reached the top of the house first, completing their side. The men's side took much longer to finish, as the men did not work hard. Tautunu became angry with the men. In his rage, he laid a curse upon the building which turned it to stone. The proverb implies that women will turn their hands successfully at any task that must be done, and will work hard until it is completed (Fairbairn-Dunlop, 1996).

Before exploring gender identity in the disaster experience it is important to provide a context of dominant constructions and understandings of gender identity in Samoa. This section draws on relevant literature and my interviews with men and women while undertaking my fieldwork in Samoa. It is important also to acknowledge that gender is culturally specific. In the Samoan context, 'roles' and 'identities' are tied up with the positioning of an individual within the village and *aiga*. In this context, rank and seniority override ideals about gender roles, and categories such as *matai* or non-*matai* dictate to a large extent the roles that an individual plays within village life (Shore, 1982; Fairbairn-Dunlop, 1996; Park et al., 2000; SPDRP, 2002).

There have been significant critiques within the feminist geography literature on research focusing on gender 'roles' and a shift towards conceptualising gender in terms of gender 'relations' (Gregson et al., 1997). Rather than construing gender in terms of socially

prescribed roles, the concept of gender relations sees gender as a relational term which involves power relations between men and women (Weedon, 1997). Although the social constitution of gender in different societies is usually defined through the concept of gender roles, making sense of gender in this way can be problematic (Gregson et al., 1997). By thinking of gender differences in terms of 'roles', research tends to homogenise and essentialise women's and men's qualities and characteristics, no matter how hard feminist geographers try to nuance their accounts of gender roles and relations with comments about spatial and historical specificity. One way of countering this unintended essentialisation is to acknowledge the differences and fluidity of men's and women's experiences (Weedon, 1997). This chapter attempts to do this by exploring the multiple subjectivities adopted by men and women in disaster situations. However, I would argue that there is still value in exploring conceptualisations of gender 'roles', because irrespective of the lived reality of participants, these ideals still factor in disaster management discourses and in the imagined reality of participants.

In gender relations, Samoan society was and is heavily biased towards men. Historically, even though siblings were technically equal, as far as authority (*pule*) over land and titles was concerned, customary rules favoured males. There were two reasons for this rationale. One was that, as a rule, men brought their wives from outside the village, and stayed on the land. Therefore, they should manage the land. Secondly, women married out of their home village and went to live with their husbands' relatives where they spent most of their time and thus should not accede to the same rights as the males. In compensation, they were entitled to the *taupou*⁷ title of the family. As *taupou*, they were accorded the highest form of respect by male relatives and the village. This relationship between brother and sister and their descendents is known as the *feagaiga*.⁷ (Park et al., 2000; Va'a, 2006)

Shore (1982: 225) noted the difficulty in discussing gender identity with his Samoan participants:

⁷ A title of office bestowed by high ranking alii upon an adolescent female member (virgin) of his *Aiga*

'While gender distinctions are implicit in a number of different Samoan institutions, Samoans do not readily offer general characterisations of maleness and femaleness. When the questions are rephrased, however, from differences between male and female character to those distinctions between male and female behaviours or jobs, then the question becomes for Samoan informants much more meaningful, eliciting detailed response.'

For this reason, research on gender in Samoa is often presented in terms of gender 'roles'. Shore's (1982) research is commonly cited in discussions of the sexual division of labour in Samoa. According to Shore, men's work included: plantation work, planting taro and other crops, deep sea trolling, preparing heavy starch food staples in the *umu*, house building, canoe building, tattooing, and participating in village and inter-village political life. In contrast women's work included working on projects focused on the village centre, weeding plantations, collecting shellfish in lagoon, weaving, sewing (mats, blinds, clothes), preparing of "good" high protein foods, canned foods, European foods cooked in the main house, cleaning of the house and compound, village sanitation, caring for children and hosting village guests. Although the strict gendered division of 'roles' has decreased somewhat in the past decade, in part as a result of 'western' ideals about gender equality, the ideal is still commonly maintained, especially in rural villages like Sapapali'i, largely because it is intrinsically linked to the maintenance of *fa'a Samoa*.

Little differentiation is made between girls and boys in the household until they are about 11 or 12 years old. At this age girls and boys are assigned different roles. Boys ideally do outdoor work including heavy cooking and helping with the work of men; girls help women do indoor work including cleaning, washing and cooking done inside the house. However, these indoor/outdoor gender distinctions are merely ideals. Families with no boys will expect girls to do outdoor work if there is no other young person to do it and married women often help their husbands with agriculture during busy times of the year (SPDRP, 2002). One of my participants illustrated this point describing the way he took on the jobs of girls as a child:

“I was raised in a very poor family...from my boyhood...I was very experienced in the family life, getting copra, serving my parents, so after getting the copra I made the sack, was made to do the cooking, just like a young girl, that was my life, as a young girl, because I had big sisters but they were married so they had gone to their husband’s family, and left the family to me alone.” (Malo)

The organisation of gender roles in Samoa also has a spatial component to it. Men’s work is usually seen as *mamāfa* (heavy) and/or *palapalā* (dirty). It is commonly associated with the bush or other areas peripheral to the central village area (*’a’ai*), such as the cookhouse, the back part of the village, or the deep sea. In contrast, women’s work, which is *māmā* (light) and/or *mamā* (clean), is focused on the central village and household areas (Shore, 1982). ‘As Samoans frequently say, girls *nofonofo* (stay put) and work generally near the places where they live (*nofo*). Males travel or move (*gāioioi*) both to their work and in their work, an activity that is seen to involve greater expenditures of energy and more activity than women’s work’ (Shore, 1982: 227).

Similarly, when my participants drew resource maps of their village surroundings, women’s resources/work was usually based around the home and surrounding gardens while men’s work and resources were most commonly associated with plantations and fishing, activities which took place further away from their homes. According to Shore (1982: 227),

‘the association of maleness with positively defined activity and femaleness with activities defined negatively in terms of cleaning, ordering, weeding, and public presentability is pervasive in Samoan thought.’

Although Shore (1982) acknowledges that these ideologies only partially describe the differences between the work of men and women in Samoa, such associations tend to emerge in the ways Samoans talk about women and men. This was clearly the case in my research. I asked my participants what they thought were the differences between men’s and women’s roles in Samoa. Below is a selection of the common responses.

“Here in Samoa, men, the men have responsibilities for going to the plantation, doing the plantation for the family, going fishing; while the women, the mother’s role is to do the cooking, laundry, you know, other household work. And it’s still up to today. It’s a culture for the women to work down here in the house, nearby, surrounding the house; that close work. Because the mothers they are responsible for the children and other stuff in the family while the father just goes up in the hill, works in the plantation, comes back in the evening, in the afternoon and then you know goes fishing. And that’s you know, still the way.” (Malama)

“so the women, so it’s weaving, just only weaving, and looking after the children...you know the women’s jobs...in our family just weaving and making food, cooking, looking after the children, but men, they work hard, make the crops, just only the men, the main thing that they do, making crops and farming, fishing, catching fish...the men, so the men in the morning they wake up and they go out to the plantation crops, working in the plantation, then the farming... and then coming back after the lunch if they want to go out fishing for dinner, but some other days they work for the whole day at the plantation” (Matalena)

Matalena continued, describing a typical day for her in the village.

“so for me, when we wake up in the morning we prepare for the family, you know we see many jobs like picking up the rubbish, at the front, at the back, making the fire and cooking the food and after that if the family is finished their lunch then do the washing and then, then weave this kind of mat (sleeping mat) it’s very easy to weave this kind. If you feel tired then you just rest and then after that wake up ready for more cooking. If you’ve already cooked the food for in the evening then you go out and pick up rubbish again and do weeding...lots of jobs to do, weeding and bathing the children” (Matalena)

Although it is important to understand the ‘roles’ that men and women play in Samoan society we need to be mindful of the ways in which this could essentialise men’s and women’s identities by understanding them in terms of binary opposites (Gregson et al., 1997). I would argue that we need to move beyond these categorisations, without discarding them altogether, in order to allow us to explore the ways in which these gender roles are both fluid and contested. This approach provides a space in which to explore the ‘hidden spaces’ between these normative understandings of masculinity and femininity. It

also illustrates the ways in which men and women adopt multiple subjectivities, prioritising different identities in different situations (Weedon, 1997).

Gender and the Disaster Experience

Men and women assume multiple subjectivities during disasters. While my participants spoke of their experiences, they shifted between different discursive positions; sometimes they positioned themselves as helpless in the aftermath of a major cyclone, while at other times they described the ways in which they ‘got on’ with the cleanup, even when their homes and plantations had been almost totally destroyed. Ultimately what came through in interviews was a strong sense of strength and resilience even when they were simultaneously feeling overwhelmed by the extent of devastation from the cyclones.

Maintaining Norms or Strategic Essentialising of Gender Identities?

The disaster experiences of participants revealed the ways in which dominant understandings of gender in Samoa impact of people’s ability to help prepare and recover from disasters. As Weedon (1997) argues experiences are given meaning through the multiple discursive systems people use and people prioritise different discourses in different situations. Subjectivity is fluid and highly contradictory.

Some interview questions were asked about hypothetical situations, while others were based on their experiences of previous disasters. Although in hypothetical situations participants adhered more strictly to a gendered division of labour, their lived experiences of past disasters also revealed the ways in which men and women attempt to organise their disaster preparation and recovery around the most ‘appropriate’ roles for men and women (Hoffman, 1999).

Participants were asked what the differences were between the jobs that men and women would do when they received a disaster warning. According to Tufi, a male participant:

“men are concerned with the houses, strengthening up the houses, getting the lights and the candles and the lanterns ready. Women are more concerned with getting the foodstuffs ready and seeing if there is water and stuff like that...women are concerned with food and the clothes and the people, the older persons and the kids, and men are involved entirely with the physical, the preparedness of homes and the hard stuff”

Responses commonly referred to this distinction between the ‘hard work’ that men did and the work women did inside the home. Another participant commented:

“the men have to go and do the hard work for preparing the house, the women prepare food and water, you know that’s what they’re doing in the house”
(Malama)

The idea that men would do the ‘hard work’ is linked to broader understandings of gender identity in Samoa. A research report on Gender, Households, Community and Disaster Management in the Pacific (SPDRP, 2002) found similar ideas about the roles of men and women in disasters. Males, particularly young men, stated that their role as “strength of the village” was still their self-identity and that their role was to protect their sisters (SPDRP, 2002). A more detailed discussion of ‘male as protector’ expression of masculinity is discussed later in this chapter.

Similarly, when asked what men and women do during the initial recovery phase, there was a clear distinction between ‘men’s work’ and ‘women’s work’. According to Matalena, “the mothers wash, the women meet and the men meet, the men’s main goal is to repair the house and make it stronger and looking for the crops”. After Cyclones Ofa and Val, women spent the first two or three days doing the washing before they did anything else. Women described having to put everything outside to dry, including their clothes, because all of their household contents were wet from four days of constant rain.

“oh I have a lot of things to do, a lot of mess, everything was wet you know, so I have to clear up all the mess, I put everything outside for the sun “
(Luafata)

“I think that the first thing we’re looking for is the food to eat and the first thing after the cyclone is you need the house to dry... put it in the sun all the mats, the clothes, the washing, everything” (Matalena)

For men, the disaster recovery phase was characterised by having to re-build houses, often building a short-term temporary fale before a stronger one, which took longer to construct, was built. Men’s role in physical re-building is characteristic of disaster recovery across the globe and is often the more ‘visible’ recovery effort. According to Dann and Wilson (1993) this means that men often receive more recognition and media attention for their work than women who according to Cook (1993) have the unenviable task of putting lives together.

There were severe shortages of building supplies after Cyclones Ofa and Val and people had to make do with materials salvaged from damaged buildings. Men also went to the plantations to recover food that hadn’t been destroyed by the cyclone. Breadfruit and bananas commonly grow around people’s fale, but as these were almost completely destroyed by the cyclone, families had to rely on root crops like taro and ta’a’mu from their plantations for food.

For some families, the immediacy of tasks during disaster preparation and recovery meant that they adhered less strictly to ‘appropriate’ tasks for men and women (this will be discussed in more detail later in the chapter). However, other participants believed that there was very little change in the kinds of jobs men and women did after the cyclones. According to Matalena:

“so...for instance, if the cyclone is finished so you know the main jobs like...making the saka, preparing the food...I think it’s better for women, preparing the food is better for women”

When asked why she thought this job was better for women she replied:

“ah you know I think we can’t do the men’s jobs, so they all doing their own but we doing ours, no change, but we can’t do the men’s job I think it’s too heavy for us, we’re not strong enough to do that”

In the context of the village, this organisation of tasks around dominant understandings of gender 'roles' appeared to be a very efficient way of delegating tasks, particularly given that the family unit is commonly made up of multiple sets of parents, children and grandparents. In this respect, it attempts to ensure that everyone is protected and provided for, particularly those most vulnerable, including children and elderly relatives. Hoffman's (1999) research on the 1991 Oakland fire in California reveals the way in which in the post-disaster context, men and women retreated to deeply-rooted cultural patterns of hegemonic gender roles. Men were likely to assume control of the family helm and liaised with insurance companies and made the major decisions concerning recovery and rebuilding. Women assumed roles as primary household managers including obtaining and distributing food and household supplies. According to Enarson and Morrow (1998) women's taken for granted skills which help prepare and maintain their households in times of crisis are commonly depended upon and exploited in the disaster context. Hoffman's (1999) research in California revealed that in some instances these adopted gender roles persisted for the course of several years after the disaster event.

There are, however, potential shortcomings with this strict gendering of disaster preparation and recovery. Luafata's husband works in Apia Monday to Friday. This is common for a number of families. When she received the warning for Cyclone Heta her husband was in Apia and with the ferries and flights between Upolu and Savai'i cancelled, there was no way that he could make it back before the cyclone hit. She phoned the men they employ to work in their plantation and got them to come down and secure her house with coconut leaves and ropes. Although she said that she knew how to do it, she said it wasn't her job and she probably wasn't strong enough. In doing so she conformed to the hegemonic understandings of gender, but also suggested that if the men hadn't been there she probably would have attempted to do it herself.

One participant, Sene (79), lived alone in a house with six of her grandchildren. Her children have all left Sapapali'i for Apia or overseas. During Ofa her husband was dying

and she was caring for him. Sene and her young grandchildren tried to protect her house but because disaster preparation is organised around family units (*aiga*) she could not rely on any of her neighbours to help because they were preparing with their own families. In this situation she was extremely vulnerable and although she knew how to prepare the inside of the house for the cyclone she had no one who could properly protect the outside of the fale (deemed ‘male’ work). Her eldest grandchild was a girl and didn’t know how to secure the house. Similarly, the recovery phase took a long time because she had to wait for her sons to come visit so that they could help repair the house and clear the thick mud that had covered the ground floor.

It is difficult to assess whether adherence to hegemonic Samoan understandings of gender during disasters is a reflection of broader understandings of gender appropriateness or whether as Hoffman (1999) argues, it is a strategic way of efficiently delegating tasks during this often chaotic time. What is apparent, however, is that while it is advantageous in many situations, there are also instances where it can increase the vulnerability of families, particularly smaller families or those where men have left the village whether temporarily or permanently.

Women as ‘powerless’ or ‘survivors’?

The stereotypical image of the weeping woman in disasters, the passive victim, which is contrasted with a ‘heroic’ male, has been heavily critiqued in the gender and disaster literature (e.g. Fordham & Ketteridge, 1998; Enarson & Meyreles, 2004)⁸. Such essentialising negates the actual agency women have in the disaster process and the active ways in which women engage with disaster experiences. However, in some situations women do position themselves as powerless in the face of the disaster event. It has also been suggested that in some situations presenting themselves as ‘powerlessness’ or as a ‘victim’ may be strategic, for example, in order to receive aid (whether from extended family, government or NGOs). It is important also to acknowledge that for some women, their positioning as victims is linked to broader processes and historical events in their

⁸ These critiques are linked to broader criticisms of the essentialising of ‘third world’ women as passive victims in feminist and development literature (e.g. see Mohanty, 1991)

lives which mean that they position themselves in this way, rather than solely a consequence of the disaster event.

Some women positioned themselves as a victim in the sense that they felt powerless in the face of a natural event which beyond their control. These cyclones were of a magnitude greater than anything they had experienced before and therefore it was a sense of things being beyond their control. Laufata explained her feelings when it hit, “I didn’t know what to think at the time but it’s unbelievable, maybe it’s like a nightmare. It’s so sudden”.

For Matalena, this was the first cyclone that she had experienced.

“yes, so we were afraid, so during Ofa’s two days, day and night, so I was very afraid but also I wanted to see the cyclone...so before Ofa I wanted to see a disaster, to see what’s happening there...you know if the wind makes me fly so I think I wanted to see it, but suddenly we have cyclone Ofa, so I feel the house is nearly completely damaged, just waiting for it to end, so we nearly die, the whole house is damaged, so we nearly died, we were afraid.”

The sense of helplessness was compounded by the fact that Samoa was struck by two large cyclones within eighteen months of each other. To rebuild after one cyclone was hard, but to have to rebuild all over again eighteen months later was extremely tough on people.

“during that part between the two cyclones is was very difficult for us Samoans, it’s just the time repairing from Ofa and then we’re struck by Val. It’s that in-between, then it’s time to start to grow crops and then Val came and destroyed everything again, it’s very bad...you know we were starting to grow crops in that in-between time and then Val came and destroyed the crops when we were nearly ready to use them. So then after Val we had to spend more time to replant again. It was very hard.” (Matalena)

For others the sense of being helplessness was associated with the opinion that they were largely left on their own with very little government help in the initial stages of recovery.

“they didn’t give much to us the government, only the food, they provided maybe every week I think the family had two sacks of rice, or one sack, it depended on how many people they had, and flour, that’s all” (Luafata)

This was coupled with a feeling by some participants that the Samoan government should have provided more assistance to people:

“so...I think the government should help us for the three months after the cyclones...but they didn’t (after Ofa). Just only the time the cyclone had just finished ...they don’t help with the building the houses, just only the food. You know I think that type of help, that preparation, has not ever been given from the government. I think from some other community from other countries they bring some things, but not the government...So yeah, I think that we need that long term. I think the government should...help us that term, maybe three or four months, through these months, but the government didn’t do that. I don’t know why, or I think you know, they weren’t able or, they build their own selves, you know, they stay on their own, you stay on your own” (Matalena)

As aid started to arrive, largely in the form of basic food supplies, most participants accepted that they needed to rely on external aid until their first planting of crops were ready to harvest. Laufata explained the way in which they were almost totally dependent on government and other external aid for food after the cyclones because all their crops were destroyed. Similarly Matalena described the post-disaster exhaustion:

“yeah they (the people in the village) were all tired, and they feel not good, they become sick but we feel the heat, all the trees near the house were damaged, all fell down and we depend on it for the fresh air, so that’s why they felt very tired, they just sat in the house and...waited for the food during (first) two weeks” (Matalena)

Mele believed that Samoans should rely on overseas assistance, both from overseas governments/aid agencies and from family members, following disasters like Ofa and Val. She explained:

“there was no way of income after the cyclone, I think we should depend on overseas help, but I think our way of income like taro, crops, so they were all damaged at that time after the cyclone...I think we got the most money during that time from overseas” (Mele)

Although it has been suggested in the literature that in some disaster situations people can strategically adopting a victim/powerless subjectivity in order to receive aid, in the context of my research, acceptance of external assistance was simply the only realistic option for families until they had crops to harvest. None of the women who participated in my research remained in a state of dependency following the disaster, instead describing the ways in which they ‘got on with things’, once they got over the initial shock of the cyclones.

When talking about past disasters, women also spoke of the fear they now have as a result of living through cyclones Ofa and Val. Sene was extremely worried about the coming 2006/7 cyclone season which was meant to be one of the worst in many years. She said that sometimes when the wind blows really strongly she takes her grandchildren outside away from the sea edge (where her house is) because she is worried that the sea may wash into the house. She said that these days there are “lots of worries” because she has her young grandchildren to care for. If it was just her she could just get up and go, but she can’t do this with her grandchildren. This is not to say that *only* women ‘worry’ in disaster situations, a later section of this chapter will explore men’s fears in disasters and the challenges they often face in terms of expressing these fears, which usually go against dominant constructions of masculinity.

Although in some situations women experienced a sense of powerless in the face of the cyclone damage, these subjectivities were outnumbered by situations in which women were clearly strong, resilient survivors. An increasing body of literature from across the globe provides illustrations of ways in which people under multiple stresses display resilience (Fordham & Ketteridge, 1999). Fordham and Ketteridge’s (1999) British research revealed the ways in which disaster experiences and the recognition of their abilities to cope led to positive gains in these women’s self-images. In such contexts women are clearly not powerless or ‘passive victims’.

When Cyclone Val hit, Sene realised that her house would not be safe to stay in as it was too close to the sea. The sea started coming in to the house. As the winds got worse, Sene

decided that she and her grandchildren should to leave the house. They went to a rented van that belonged to another family and they stayed in it for two nights. For two nights they sat in the van, being buffeted by the winds and rain. When the wind and rain stopped it was clear that this had been the safest decision as the house was very badly destroyed, including the bottom storey being a metre deep in thick mud. Although Sene was widowed and in her mid 60s when Cyclone Val hit, she clearly showed strength in her ability to keep her grandchildren safe during the cyclone.

Another characteristic of women's discussions was the way in which they described 'getting on' with disaster cleanup and downplayed the negative impacts that it had on their lives. Although Laufata's house and property were severely damaged she commented, "oh I have a lot of things, a lot of mess...but our house was still standing, so only small repairs". Similarly, Sene, described the way she and her grandchildren got on with the cleanup process, without any help from other families:

"after the cyclone the mud and all the dirt and everything was this (a metre) high. It's just me and my grandchildren because other people were doing their own, each family were doing their homes and so we just tried to clean up"

The availability of food also appeared to be an important factor in their ability to 'get on' after the cyclones. For this reason, Naitua perceived Val as more of a disaster because there were far fewer crop reserves to rely on (as they were still re-planting and recovering from Cyclone Ofa). I commented to Mele and Naitua that it must have been really difficult after the cyclones. Mele and Naitua responded saying:

"but we have some, you know some food from the Red Cross" (Naitua)...
"and from the government" (Mele)...
"and they gave us some rice, flour and sugar to wait until our food is ready (Naitua)"

Rather than dwelling on the negatives, participants focused on the fact that they had food, and therefore the ability to 'get on', following Cyclones Ofa and Val. This resilience and

‘getting on’ attitude are possibly linked to aspects of Samoan female gender identity which link back to the proverb about the women and the thatch.

As researchers we need to be careful not to essentialise women’s experiences. Although it is important to move beyond depictions of women as victims, we do need to be careful that this emphasis on strength/resilience doesn’t result in ignoring the ways in which women are victims in the sense that they have been affected by a disaster. The challenge for researchers is how to acknowledge different and shifting subjectivities while simultaneously creating practical agendas for change (Weedon, 1997; Reed & Mitchell, 2003; Cupples, 2007). By moving away from binary understandings of subjectivity we can explore the multiple subjectivities that women adopt, which will lead to more meaningful understandings of how gender mediates the disaster experience.

Men as ‘protectors’? – Masculinity in disasters

Dominant understandings of masculinity in Samoa mean that in a disaster situation men are expected to be the protector of their family. This is linked to the allocation of authority in the village which usually means that *matai* titles are held by men, and because masculinity is characterised by physical strength. For this reason, men are expected to take responsibility for tasks including the securing the fale before a cyclone hits and repairing or rebuilding fale afterwards.

A small number of studies have examined the way in which men’s risk-taking behaviour can increase their chances of injury or death in a disaster situation (Gomariz, 1999; Delaney & Shrader, 2000; Enarson & Meyreles, 2004). Tufi described his father’s attempts at protecting his wife and grandchildren during cyclone Val and how this attempt at being a protector ultimately led to his death.

“my father died from that big storm, he fell and it was from internal bleeding that he suffered...three months later he died. And, that (being alone) was part of the thing I think that killed him, he lost the battle with himself, he was alone at night and my older brother was not able to get to him with all the trees falling it was another village, another house, about 500 metres from him and they couldn’t get over to where he was there with my mother and just the little

kids and their big house was falling on them and he was standing up there the whole night holding that thing and I think in one big gust the wind just took him and side of the building up on the boulders and he fell on his chest. And, they didn't need to be standing there, they didn't need to be standing there, there were kids underneath, that's why he was standing there"

When Tufi saw his father four days later, his father was still worrying about his grandchildren rather than himself.

"he was not speaking, he was like a madman, he was, just quiet...and when he was able to talk...he kept saying 'I, I've never seen anything like it, I, I, I've never seen anything like this before', and then he was saying, 'the kids', the fear was his kids and the kids were young, they were his grandchildren that were with him that weekend"

Although this quote shows the way in which Tufi's father assumed his 'role' as the protector of his family it also illustrates the ways in which men too can feel overwhelmed by a disaster situation.

As mentioned above, men often assume positions of responsibility as protectors after the cyclones because they are far more likely to hold *matai* titles in the village. Malama, a *matai* in Sapapali'i described his role as a *matai* after a cyclone.

"the matai is the responsible one for his own family so he has to do it (provide assistance), that's the matai's role, to ensure that every member of his family has food and fresh water and shelter"

Matalena elaborated on Malama's description describing the roles that *matai* had after Cyclones Ofa and Val, particularly in relation to initial income generation.

"so the matai meet and the matai make decisions and then he tells us ... he makes his own decisions and tells us what to do, makes decisions about how we will get an income if we have damaged crops. If the cyclone came but we still have a large supply of taro then after the cyclone he knows the taro is a good early income after the cyclone so we go and fetch the taro, and take it to the market and fetch some money"

The extent to which men assume positions of power in post-cyclone reconstruction needs to be considered. The implications of this male-domination for women, is a dominant theme in the gender and disaster literature (e.g. Fordham & Ketteridge, 1999) and occurs at various levels (whether regional, national or local). As the SPDRP (2002: 7) state:

'The male monopoly of decision making outside the home is a significant fact to be recognised for disaster management. For planning purposes, the fact could either be accepted or challenged. If it is accepted, disaster prevention will be less effective because it will not address practical measures for household preparation. If it is challenged, it will be necessary to convince governments and some NGOs that by including women in disaster-management planning and decision making, better results will be achieved.'

The international literature commonly cites the ways in which male domination outside of the home extends to formal emergency planning organisations which are generally male-dominated. International research from shows that women are markedly absent in decision making positions, leadership roles or other higher levels or emergency management (Dann & Wilson, 1993; Williams, 1994; Morrow & Enarson, 1996). This male domination in formal disaster management can have major implications in terms of approaches to disaster management, including the risk of institutions creating particular subjects for their intervention based on stereotypical assumptions about men's and women's roles in disaster events.

In the past, disaster management in Samoa has been dominated by men (Tala, pers comm., 2006). However, both Tala and Filomena noted that there has been a slight shift in terms of women's representation in disaster management at a national level. Tala believed that women are increasingly involved because disaster management is now seen as everyone's responsibility, rather than just the role of 'experts'. At the family and community level it is the women who make sure that children and the elderly are taken care of in disasters. The major challenge is to move from women's involvement at a community level to encouraging them to take up leadership roles in disaster management at a national level (Tala pers comm., 2006; Filomena pers comm., 2006).

According to Filomena, disaster related fields are still dominated by men in Samoa and in the Pacific more generally. Women's involvement at a national level tends to be in areas that are seen as 'appropriate' roles for Samoan women, for example, health, welfare, and women's affairs. However, Filomena believes that because Samoa is linked to an increasingly globalised world, ideas about gender roles are shifting somewhat and that this may help to encourage young women to take an interest in disaster related fields where males traditionally dominate (e.g. engineering, medicine, physical sciences).

Just as women adopt multiple subjectivities in disaster situations, it is also important not to essentialise men's disaster experiences. According to Fordham and Ketteridge (1998: 92) 'men appear to cope well with extreme events, but often simply do not express the anxieties that they feel'. Men often appear to look for practical (rather than emotional) solutions to disasters. When there is no role for practical help (perhaps because these roles have been assumed by external agencies or because the extent of damage is so great that the level of help necessary is beyond their control) they can feel helpless and unable to express their anxieties because of stereotypical assumptions about masculinity in such a context (Fordham and Ketteridge, 1998). The male participants in my research commonly referred to the fear and hardship at a community level, rather than speaking of their own fear in these situations. An exception was Falevi who described how scared he was during Cyclone Val when the house that he was living in with his family fell down during the cyclone.

Clearly understandings of masculinity and self-identification by men, impacted on the ways in which they prepared and recovered from cyclones and the roles that they played. In Tufi's father's case, his attempts to protect his wife and grandchildren, in accordance with his role as a protector, ultimately led to death after Cyclone Val. However, just as we need to ensure that the experiences of women are not essentialised into their experiences as 'victims' we need to also ensure that men are not solely portrayed as 'strong' 'protectors' as this negates their ability to express other feelings such as 'fear' or 'isolation'.

Conclusion: Transcending normative gender boundaries?

Given the nature of disaster situations like cyclones, and the fluidity of gender identities and subjectivities, it has been suggested in the gender and disaster literature that disasters could provide contexts in which men and women transcend normative constructions of femininity and masculinity (Delaney & Shrader, 2000; Enarson, 2000). Women have proven themselves indispensable when it comes to responding to disasters. Following Hurricane Mitch in 1998, women in Guatemala and Honduras were seen building houses, digging wells and ditches, hauling water and building shelters (Delaney and Shrader, 2000). Though often against men's wishes, women in disaster situations are often willing and able to take an active role in what are traditionally considered "male" tasks. This offers the possibility of changing society's conceptions of women's capabilities.

The only previous study undertaken on gender and disasters in Samoa (SPDRP, 2002) revealed that during Ofa and Val everyone did what they could, according to their physical capacity and initiative, rather than according to cultural ideals about gender and work. The immediacy and severity of the situation meant that people were simply concerned about getting the necessary tasks done.

The experiences of my participants during cyclones Ofa and Val revealed similar findings to those of the 2002 SPDRP study. I asked Malo whether men and women have different tasks during cyclone preparation and recovery. He responded saying,

"when disasters come we don't keep to the responsible roles, in disaster times we have no specific roles to play it's a role of observation, good observation when you look at something so you go there and do it"

One major reason for the transcending of traditional roles was the immediacy of particular tasks after the cyclone. If homes are destroyed, one of the first tasks is to build shelter. Matalena described the way men and women work together on this task (which in people's hypothetical disaster discussions was 'ideally' a man's job).

*“so they help together, they worked together...
 (Beth - would the women help with the building of the fale?)
 ...yes they help, if there's a job they have to do it, women have to help thatch the roof, just thatch to the man up there on the roof...there are other kinds of things too, fetching the stones, the little stones in a bucket, so they (men and women) work together, after the cyclone they know what the jobs come first to survive the family, so they work together” (Matalena)*

Stepping into roles outside of the ‘norm’ for men and women was especially common in households where there was a shortage of men or women. According to Malo,

“there are families that the women have to help the men in because there are very few people but only if the children are old, when the children are young the women have to stay in the house and look after them and do other tidying up things in the house...so we have no particular roles on all the disaster preparations, we have to share the roles...what I mean is you have to do the very urgent things at that time”

This transcending of normal roles in disaster situations was however, in most situations, only temporary. Once immediate recovery tasks were completed participants explained that men and women would return to their “normal roles” which were perceived to be more “suitable” for men and women. It was interesting that this shift appeared to be more in accordance with cultural understandings of gender appropriateness rather than physical capabilities. For example, Matalena explained that although cooking on the fire was a job for men, women could do it if there were no men around:

“so, you know making oven, so that is a job for men, but you know it's very hot there by the fire, so we can do it if there are no men, we can make the oven, if there is no men we can do it”

This transcendence may also reflect broader processes taking place in Samoan society. With the adoption of a number of gender equality policies in Samoa, including CEDAW, there is a growing awareness of the need for women to be provided with opportunities beyond their traditional spheres of influence, and for men to take on some of the domestic duties in households. However, although this change is happening at a national level, local understandings of gender appropriateness appear to be changing more slowly.

According to Tala, Secretary General of the Samoan Red Cross, who works on disaster education and response,

“perception is really hard because, you know, because we still have elderlies who strongly believe that it’s a men’s thing, it’s a women’s thing. But the youngsters they are growing up with the mentality that we are the same you know, everyone can do anything, irrespective of the type of job” (Tala, Red Cross)

It is therefore important not to assume that because gender equality policies have been adopted at a national level, gender ‘roles’ will change dramatically in local situations. To do so would be to risk overlooking the reality of gendered differences at a local level, potentially increasing vulnerability in a disaster situation. Given the experiences of my participants in Cyclones Ofa and Val it is evident that to some extent normative understandings of gender and work were transcended in the immediate disaster context, while in other situations families resorted to gender-appropriate roles as an efficient way of allocating tasks, especially during disaster preparation. By expanding our examination of gender relations in disasters to explore gender identities and the multiple subjectivities adopted by survivors, we can start to understand the fluidity of the disaster experience and reduce the risk of essentialising the experiences of men and women. This chapter has also provided examples of ways in which gender plays out differently in disaster contexts in Samoa than those in the disaster literature. This further emphasises the danger of applying gender and disaster blueprints from other regions of the world because clearly there were aspects of the international gender/disaster literature which differed from Samoan disaster experiences.

Chapter 4: The Hybridity of Risk - Re-thinking Vulnerability and Resilience

Introduction

The disaster literature, produced by both disaster researchers and practitioners, commonly focuses on community and individual resilience and vulnerability. These concepts provide the linkage between disaster ‘events’ and the broader context of people’s daily lives and development processes which impact on their disaster experience. The linkages between development and resilience and vulnerability to hazard events are very strong as processes of development. For example, deforestation for agricultural expansion or reclamation of coastal land for housing, can often lead to increased vulnerability to hazard events. However, development processes can also provide solutions for reducing people’s vulnerability to hazards, for example, by increasing their economic security through livelihood schemes. The relationship between development and resilience and vulnerability is complex and can have both positive and negative impacts in terms of disaster vulnerability.

Large sums of money are often spent undertaking ‘vulnerability assessments’, in an attempt to assess degrees of risk in particular locations. Often participants’ experiences of past disasters are explored in order to understand their coping strategies and vulnerabilities, while other studies attempt to explore ways of reducing vulnerability to future disaster events. Although such studies are valid, too often ‘vulnerability’ and ‘resilience’ are seen as opposite ends of the spectrum, with people either being seen as resilient or vulnerable in a disaster event.

The vulnerability approach to disaster management emerged in during the 1980s. According to Zaman (1999) this approach doesn’t deny the significance of natural hazards as trigger events, but focuses largely on the structural and systemic causes that

generate disasters by making people vulnerable. In such a context, so-called ‘natural disasters’ are viewed as ‘unnatural’ events. Using the example of typhoons, Allen (2003) describes the way these events are an integral part of the seasonal cycle for members of affected communities. People in these communities manage levels of vulnerability according to their priorities and capacities as part of their daily existence. Therefore, vulnerability to ‘disasters’ can only be fully understood and addressed through the consideration of these events within people’s everyday livelihoods and underlying vulnerability. Because vulnerability is so closely tied to broader societal and environmental processes of development it cannot be treated as a separate phenomenon in times of crisis (Hewitt, 1983; Winchester, 1992; Allen, 2003). Like many other terms (e.g. ‘sustainability’), ‘vulnerability’ has become a “buzzword”, used in so many contexts, that it is in danger of becoming useless (Cannon, 2000). It is therefore crucially important to acknowledge the political nature of ‘vulnerability’, and the conflict and contention surrounding such analyses.

Subsequently, resilience is often seen as the flip-side of ‘vulnerability’. Rather than focusing on the ways in which disasters render people and communities vulnerable, focusing on resilience promotes an examination of the ways in which people survive and recover from disasters. Resilience is a concept commonly found both in the disaster literature and in disaster management policies of governments and NGOs. Glavovic et al., (2002) suggest that it is useful to think of resilience as a layered concept which ranges from the individual to the household, community, ethnic group and even global level. Different actors can undermine or increase resilience in particular situations. Pelling (2003) describes individual resilience to natural hazards as the ability of a person to cope with or adapt to hazard stress (see also Glavovic et al., 2002). Such resilience is a product of the degree of planned preparation undertaken in the light of the potential hazard, including relief and rescue.

Taking the concept further, Dovers and Handmer (1992) distinguish between the *reactive* and *proactive* resilience of a society. According to them a society that relies on reactive resilience approaches the future by strengthening the status quo and making the present

system resistant to change. In contrast, a society that develops proactive resilience accepts the inevitability of change and tries to create a system that is capable of adapting to new conditions and imperatives. There is considerable debate concerning the definition and utility of the term, largely as a result of its evolution over the last thirty years into an all-encompassing umbrella concept which Klein et al. (2003: 42) argue, renders the concept ‘almost meaningless’.

Using the disaster experiences of my participants in Samoa, this chapter argues for an alternative approach to understanding these two terms. Rather than seeing ‘vulnerability’ and ‘resilience’ as either/or concepts, it is more valid, I would argue, to take a hybrid approach which acknowledges that people are neither straightforwardly resilient or vulnerable, but instead simultaneously display elements of both. Therefore it is more meaningful to not place people’s experiences within these ‘boxes’, but instead explore the fluidity of such experiences. Resilience and vulnerability are linked logically but are not necessarily opposite ends of the spectrum. A person or community may be both vulnerable and resilient at the same time (Paton, 2006).

It is also important to acknowledge that a single event or process can have significantly different impacts on people, even if on the surface they appear similar. Consequently it is of little value to attempt to distinguish between processes that increase vulnerability and those that decrease it, because people’s individual contexts mediate these processes in different ways. Exploring the hybrid spaces between vulnerability and resilience provides an alternative way of making sense of disaster experiences and furthers our understandings of vulnerability as a concept.

This chapter is divided into two central sections. The first section explores the ways in which people in Samoa make sense of disasters. This ‘sense making’ that takes place following a disaster is just as important as the physical rebuilding in terms of people’s ability to recover but is often overlooked. Through understanding *how* people make sense of disasters, we can start to understand their motivations and actions in disasters and their everyday lives. The way in which people make sense of disasters is extremely

heterogeneous. It is a result of multiple knowledge sets including cultural, religious, historical and scientific beliefs and varies according to how people mediate these ways of knowing. Rather than seeing historical understandings of disasters as separate from contemporary understandings, this section argues that historical legacies shape the ways in which people make sense of disasters today. People's perceptions of disasters are constantly changing and vary greatly depending on individual contexts and values.

The second section of this chapter explores 'resilient vulnerabilities', and blurs the boundaries between vulnerability and resilience in people's disaster experiences to examine the hybrid spaces between the two concepts, where most people are situated. If we acknowledge the hybrid spaces which exist between these two terms and move away from attempting to classify people as 'vulnerable' or 'resilient' we can begin to make sense of disasters in new ways. The chapter concludes with a summary of the chapter and a brief discussion of what such an approach would mean in terms of disaster and development intervention.

Making Sense of Disasters

'time is an important factor in how disasters are constructed, normalized and remembered... there is a temporally-produced sense of vulnerability that is manifest in a community's past experience of disasters, why it is exposed to hazard, how it responds to them, and what it selectively remembers or forgets about them. On the one hand, this is both process and event but writ much larger than the time-scale usually measured in risk assessment or disaster management. On the other hand, it is also about how time generates its own forms of vulnerability in both influencing how a hazard is selectively remembered and in determining what is perceived to be a disaster. Social memory may be a very intangible factor to measure but it may also be crucial in influencing how people ultimately behave in disaster situations. How history renders a community vulnerable is not simply a matter of understanding hazard as an event but also of considering it as a process that constructs its own perception of disaster (Bankoff, 2004b: 36).'

The numerous ways in which people make sense of disasters are just as important as the physical rebuilding that takes place after disasters in terms of people's ability to recover and the ways in which they re-work the perceptions of disaster risk over time. It is important to emphasise that it is impossible to separate historic understandings from contemporary ones as each disaster event, and the stories told, re-works people's understandings and perceptions of risk.

Hazard researchers have not paid much attention to disaster memories of people, despite the fact that many long-gone disasters still serve as important reference points amongst people and yard-sticks for public policy making (Mitchell, 2000; Bankoff, 2004a; Bankoff 2004b; Bankoff 2004c). Bankoff (2004c: 32) suggests that perhaps it is the result of people becoming so accustomed to manifestations of disasters that they have simply 'lost the ability to discern its visible forms except in the more extreme cases'.

The ways in which people make sense of disasters are shaped by different sets of understandings, including cultural, religious and scientific, and are mediated by the emphasis they place on these different ways of knowing. Acknowledging the heterogeneity of the ways in which people make sense of disasters is therefore critical in furthering our understanding of people's behaviour in disasters events and in the daily lives of people who live in a high hazard risk environments.

Culture determines not only how a disaster comes about, but also what constitutes a disaster in the first place. By exploring the memories of past disasters in Samoa it was possible to start understanding the ways in which similar events are seen differently over time. A dominant theme in discussions with participants about cyclones that occurred prior to Ofa and Val was that they were not perceived as 'disasters'. In the following quote, Tufi explains the way in which cyclones were never a real 'risk' in the minds of the people in the past:

“cyclones were never a risk that was real in the minds of the people and I think that it’s true for Papa and for all of Samoa, at least that’s the way I feel. I believe winds and storms it was never a disaster, there’s never a threat, to the lives of the people. I remember well the cyclone of 1960, of 1966 and up to the big two cyclones, and it was like, it was something different. The water was rising, the sea was coming in and people go on, you sort of tie the coconut leaves around your fales just to keep the rain out and hope the place won’t fall, but the fear that is now implanted since after the two cyclones was never there in the 60s, was never there any other time until after that one (Ofa).”

Tufi’s recollection of disasters during the 1960s while he was growing up, and his comparison to the cyclones of 1990/1991 illustrates the how the perception of risk and of what constitutes a disaster, clearly change over time. He continued his story elaborating on the ways in which people didn’t fear disasters (like they do now) during that time:

“And when I say there was no fear I remember 1960 it was just in the very midst of the winds it was about 10 clock in the morning and there was all this breadfruit in my village it was beautiful, there was no fale palagi, no buildings, no iron roofs and stuff like that, perhaps for just one, the church building and even the school building was a Samoan longhouse and there were breadfruit all falling in the village by the big winds and it was during a very nice season, the fruits the trees were very big and it was ready to eat so that was my bit to do, as a young one, my father said “go get some baskets and get the breadfruit and bring it into the fale” and this was you know during it, it was going 60 miles an hour, it was fun, then it started to rain and it was like a pool in the middle of the village and then we were there with both breadfruit and us and we were all dipping into the fun of it and it was kind of a disappointing when suddenly the wind stopped you know, we wanted to see the sea come in and that was it. I said that to my kids you know, there was no fear and I think that was the time when people were closest to God, when they did not know that the ocean and the wind was a danger to their lives.’

There also appeared to be a sense among some of the participants that although homes and crops were destroyed by cyclones and other disasters, people were extremely resilient and re-built immediately after the disaster event had ended. Matalena recalled the stories that she was told by the older women about past disasters:

“I just remember they told us 1889 so that’s during the 1800s, that happened then, all of Samoa they don’t have that kind of house (palagi house), just the Samoan fale like this, so only that, just sit and pray. But it was only the night, not the whole day, so only the night so when the nights become sun, become the morning it’s all damaged, it’s easy to damage it, this kind of fale is very easy to damage so they all lay down spread out and just wake up and rebuild it. It’s ok during those days, it’s very easy, not so many people, not so many children, it’s easy for them during that time, just only make the fale, just spend the whole day to build it very quickly to survive. So they only need to spend time building the fale not for the food, just brew the tea to drink, other people they have you know the coconuts when they all fall down they get the foods from the coconuts, they catch it, and that’s only the food for them, so all they are looking for is to build up the house very quickly and then build another one”

This story of coping with cyclones in the past reflects the ways in which many of the so-called ‘disaster management’ initiatives, like promoting the building of palagi-style homes, may have reduced aspects of people’s resilience to disaster events, rather than strengthened them. Hoffman and Oliver-Smith (1999) argue that local communities usually show great understandings of their environments but that too often disaster intervention disrupts these historical adaptations, diminishing rather than augmenting disaster recovery. Oliver-Smith (1999a) identified a similar loss of historic adaptations to environmental hazards in his work in the Andes, resulting in socially created increases in vulnerability in the region. Oliver-Smith argued that processes of colonialism had undermined people’s ability to cope with disaster events. In the Pacific, traditional methods of storing food have largely been abandoned, and the cultivation of some hurricane-resistant crops and famine foodstuffs has declined (Paulson, 1993).

Like the situation of Oliver-Smith’s (1999a) participants in Peru, generations of Samoan families and villages have experienced and recovered from such events. As a result, they have also built up a wealth of disaster protection knowledge that has become an integral part of their cultural heritage (Rouhban, 1999). Although natural hazards in the past created hardship they did not create destruction to the extent that more recent disasters have. Communities were extremely resilient and relied on a number of successful traditional adaptations to such hazards including inter-island exchange, agricultural

diversity, intra community cooperation, food preservation and traditional building construction methods (Campbell, 1951; Laughlin & Brady, 1978; Loomis, 2000). This knowledge is distinctive in its unique way of determining ways to act and react to hazards in the given environment. Therefore indigenous knowledge is a precious resource for its ability to facilitate the process of disaster preparedness in cost effective, participatory and sustainable ways (Yodmani, 2001). The experiences of my participants suggested a high degree of resilience as a result of cultural underpinnings. Similar findings were found in research undertaken by Jang and Lamendola (2006) on the Hakka spirit in the Thai collectivist culture. This historical legacy of resilience was reflected in the perceptions of disasters revealed in my interviews.

“I don’t know how to explain it because they don’t even care when you know they face a cyclone, they just you know, they don’t really think it’s important to them, they think you know, they know what to do” (Falevi)

As Drake (1992) argues, risk is socially constructed and is influenced by cultural biases and worldviews. It is widely accepted that people interpret information in a context defined by their experiences, beliefs and perceptions of hazards, the actions proposed to mitigate their adverse consequences as well as the information available and its sources (Dow & Cutter, 2000; Paton, 2003; Lasker, 2004; Smith, 2006). Therefore, in order to facilitate the adoption of protective measures, it is important to understand how people interpret their relationship with hazards and perceived levels of risk (Paton et al., 2006).

Another important aspect of *fa’a Samoa* which increased the resilience of people during hazard events was the community unity of village structure (Paulson, 1993). Tufi explained the importance of community support and unity of culture in disaster events:

“It’s more terrifying than the storm itself, to have to face up to your own fear alone, you need somebody there you need your aiga, you need your family, you need your village, you need the strength of your friends to come. Not everybody is built alike, you know not everybody has the same constitution and that, other people bear storms easily others break down and that’s why culture is very important. That’s why unity of culture and people is very, very important. More so than any mechanical thing that is brought in or anything, government or any other country can bring to a land. They need themselves, in the time of the storm, in the time of the disaster, they are the first aid, they need to hold hands and pray and they have not loose the composure of life in these instances, I think that is the biggest fear for me is to lose that thing.”

In the above quote, he referred to his fear of losing this unity of culture. Tufi spoke at length of this fear and compared the community strength and maintenance of *fa’a Samoa* while he was growing up with today’s situation where there has been a gradual breakdown of many of the village structures that provide support for people in disaster times. For Tufi, the most important focus for the building of resilience to disasters was the re-strengthening of the village:

“the village itself must be strengthened, must be strengthened to be able to survive these storms again...they need to go back to rebuild their culture, to rebuild their unity to rebuild their relations of trust in one family and the other, of the link between women’s and men’s role, a matai’s and matai’s wife’s and matai’s and untitled’s, those links and relationships need to be re-strengthened, to be taken back to where it was, where it was before, before modernisation. It’s the only strength and safeguard that they must have to face storms, because in the immediate course of the storm they are the only ones there and they need one another”

For some participants, disasters were only discussed in the context of interesting stories to tell children rather than as events of huge significance in their lives, while others had difficulty recalling discussions of disasters while growing up. As Mitchell (2004) reminds us, people place different significance on historic disaster events and have different stories results as a result of their own circumstances and subjectivity.

Stories were told by some of the devastation of past cyclones. These were usually accompanied by reminders of how they should prepare for such disasters. Matalena recalled:

“they tell us that it’s very bad, very bad, they give us a very big encouragement advice...they advise us you must be ready for that, if the announcer announces it’s going to be a cyclone tomorrow, you must be ready for that, so prepare the food, prepare the kerosene, paraffin you know, prepare the lamp, for when the electricity is off and then you have a lamp, you have different kinds of lamps which are easy to use, find what kind of lamp is easy for you to use, have food, what kind water, often the pipe is off during the cyclone so that kind of water, the physical things too, water, things for making food and then stay and waiting for it”

In the context of current disaster management and development which is dominated by technocratic solutions and expert-knowledge, past experience and wisdom passed down from previous generations is often forgotten or discounted. According to Kothari (2005: 443), ‘development has become a technical process of intervention that maintains the legitimacy and authority of Western modernity and the dominance of the neoliberal agenda’. A common response when asking my participants about disaster education was, “we know what to do, we’ve had cyclones before”. Not only is this knowledge important for families and communities, it is also of value to government and other agencies working in the disaster management field. This acknowledgement of the value of past knowledge, including traditional ecological knowledge (TEK) is slowly being acknowledged and valued by some organisations within Samoa. Women in Business Development (WIBD) agreed that this was something they were starting to learn about as an organisation:

“that’s something that we’re learning about, we’re trying to look at the traditional ways that people planted their crops and protected them. With the vanilla we’ve been working with...a man from Tahiti, who’s been teaching us how the Tahitians protect their vanilla in cyclones. So, now we know how to do that but we’ve yeah, it’s difficult to access traditional knowledge, because people hold it very close, um, but that sometimes means now that it’s dying out, because the younger people will, you know, buy a bag of and not worry about it so” (Karen Mapusua, WIBD)

Unfortunately, more recent approaches to disaster management in Samoa, and other regions of the world, have de-valued or ignored the role that this indigenous knowledge plays in contemporary disaster management. A document produced by Samoa’s Ministry

of Natural Resources, Environment and Meteorology (MNREM) (Nelson, 2005: 52) stated the following:

“Before the approval of the first National Disaster Management Plan in 1986, Samoa’s approach to managing disasters was ad-hoc. There were no mechanisms or systems in place such as management plans, policies, legislation, an emergency operations centre and resources to facilitate the development and implementation of disaster management programmes. Limited awareness and training programmes were developed or delivered. Hence Samoa was largely unprepared to deal with any disaster.”

Although generations of Samoans have learnt how to adapt to disasters, the perspective of the MNREM is that without official plans, policies and programmes Samoa cannot be prepared, and the value of accumulated local knowledge is silenced. Processes of modernisation have contributed to a gradual loss of many of these indigenous coping strategies (Oliver, 1989; Campbell, 1999).

Although there is a historical legacy of resilience and self-sufficiency, the following quote suggests that there have been changes in perceptions of disasters following cyclones Ofa and Val at an individual level too:

“They know how to take it, Samoans know how to live in typhoons and cyclones and it was like they were out fishing when one big storm was in and they would come back, now even with the outboard motors they would get lost at sea. You know the modernisation and technology have entirely done away with the ability of the people to be nature’s machines in the face of nature’s force... people have been stripped of that oneness with what goes around, the oneness with nature. We’re sort of now standing back every time there is a storm warning you know it’s a commotion in the family, there’s that and in 1960 there wasn’t anything. And just the radio says there’ll be high winds and stuff like that and then well people they wouldn’t be going out fishing, but for sure they wouldn’t be hiding. They wouldn’t be going into cement tanks and they wouldn’t be breaking down water reservoirs and bring old people in there, they might take them into the church building but for the young, for the older people, the able they would be round there.” (Tufi)

It is important, however, not to over-state the loss of cultural unity in Samoa. Although many processes of modernisation and development have led to the loss of traditional coping strategies, other aspects of *fa'a Samoa* continue to safeguard people in times of disaster. One example of this is the provision of remittances to family in Samoa from relatives who have migrated overseas. The sending of money and goods, immediately after disaster events like Cyclone Ofa and Val, helped to act as a financial buffer for families in Sapaali'i because they had to wait at least six months before crops were ready to harvest again, and many had repairs to make to their homes which required building materials from Apia. This form of family support can be seen as an evolution of forms of intra-family support that were used in the past. With the migration of an increasing number of Samoans to other regions of the globe, the nexus of support-networks has expanded geographically but remains strong.

Understanding the ways in which *fa'a Samoa* impacts on how people make sense of disasters is crucial if disaster management is to be successful. In Buckland and Rahman's (1999) study of the aftermath of the 1997 Red River Flood in Canada, they found that the community that was better resourced and organized and had greater internal capacity, was better placed to cope with the flood. For this reason it is crucial that the role of culture in safeguarding people during hazard events is taken into account in disaster planning. Although it is not possible, nor sensible, to suggest reversing processes of modernisation in Samoa, it is crucially important that we are aware of the potential impacts such processes are having on community cohesion and resilience. Potential ways forward for disaster intervention which don't undermine cultural resilience will be discussed in the conclusion of this chapter.

Just as *fa'a Samoa* impacts on the ways in which people perceive and make sense of disasters, so too do people's religious beliefs. Many actual and potential victims of hazards make sense of these events in theistic terms, even when they are aware of scientific and social explanations (Chester, 2005). During the *International Decade for Natural Disaster Reduction* a consensus emerged that, if responses to disaster are to be successfully managed an awareness of local culture is vitally important. In many regions

of the world, religion is an essential element of culture and must be carefully considered in disaster research and in disaster planning processes, rather than being dismissed as a symptom of ‘ignorance, superstition and backwardness’ (Chester, 2005: 319). As Verhelst and Tyndale (2002: 7) emphasise,

‘[g]enuinely entering into another culture...invariably involves an openness to spiritual and religious concerns, and an awareness that development of any sort cannot be restricted to technical skills alone’.

Like understanding *fa’a Samoa*, exploring the ways people use religion to make sense of disasters is crucial for understanding the contextual backdrop to disaster events and perceptions of risk. In many instances religious explanation is the way in which people try to understand *why* such devastation occurs (Schmuck, 2000; Homan, 2003). Despite the central importance of religious understandings in people’s sense making, there is a clear lack of discussion on the linkages between theology and natural disasters (Chester, 1998; Homan, 2003; Chester, 2005). However, there is an emerging body of literature on religion and development which can contribute to the exploration of disasters and religion.

With the emergence of alternative development theory and practice there is a growing recognition that,

‘understanding cultures and their underlying spirituality and religious traditions can and should open the way to a new development paradigm, less materialistic and technocratic...(moving)...beyond a dualistic approach which separates spirit from matter’ (Verhelst & Tyndale, 2002: 7)

The historical silencing of religious explanations has resulted in a failure to explore the ways in which people make sense of the world and events in their lives, how they make decisions and take action (Ver Beek, 2002). Samoa is a strongly Christian country and religious explanations were commonly used to explain past disaster events in their lives, as well as a way of reducing the risk of future hazard events. The week before I arrived in Samoa had been a national week of prayer and fasting to mark the start of the cyclone

season. It was hoped that through people's actions and faith in God, Samoa would be spared from any disaster events during the summer cyclone season. A belief in the power of prayer to spare people from hazard events was evident in other examples described to me by my participants.

In 2005 Cyclone Olaf was on course to hit Samoa. At the same time, the village of Sapapali'i was rebuilding their church and at the time they received the cyclone warning there was no roof on the church and some of the structural walls had also been removed. At the last minute the cyclone changed course and struck Rarotonga instead. When I asked people about why this happened they told me that it was the power of their prayers which meant that God spared them. A taxi driver in Apia also told me that many people thought that it was because the people of Samoa had said more prayers than the people of Rarotonga! The renewed faith in God was particularly strong in Sapapali'i given their circumstances. If the Cyclone had hit, their church would have surely been destroyed, and most of the six million tala raised for the rebuilding lost.

Similar explanations can be found in accounts of Cyclones Ofa and Val. Nanai's (1992) account of Cyclone Ofa draws strongly on religious explanations and understandings. One passage describes saying prayers in the midst of the cyclone (8):

"I prayed thanking God for His love. I felt certain the wind really had changed. Instinctively I felt that the Most Excellent God had listened to the prayers of the citizens in the radio with praises of God almighty. That's the feelings of all Samoans: to express their gratitude unanimously to God!"

After the winds dropped his father explained that "it is on account of God's love that we've been protected against the wind" (Nanai, 1992: 10). Nanai (1992: 23) concludes his account of Cyclone Ofa with the following comment:

'So I have made my decision: God is not to be blamed for the devastation left in the wake of Cyclone Ofa...However, all natural forces can be diverted by the persevering prayer of the person who fears God the owner of all these things.'

Lindberg and Mossing's (1996) research following cyclones Ofa and Val also revealed the dominant belief in the power of prayer in hazard events. When they asked their participants, 'what could you do to reduce the effects of another cyclone?' the most common response was 'to pray'. In such situations, religious beliefs, manifested in prayer, can be seen as a source of empowerment rather than as a measure of powerlessness in the face of a hazard event (Ver Beek, 2002).

Although religious beliefs factored strongly in the ways in which people made sense of disasters, self-blame was not evident in the accounts of my participants, because they chose to make sense of disasters in other ways. However, self-blame is often a common characteristic in religious understandings of disaster events and has been identified in research from other parts of the Pacific. Self-blame was pronounced at the 1979 South Pacific regional conference on disaster preparedness, despite the fact that since the 1950s scientists and some Pacific leaders had started to acknowledge that forces other than the immoral could be used to explain global climate warming and associated sea level changes (Brook et al., 1991). Taylor's (1998) work in Rarotonga following Cyclone Martin (1997) also revealed the presence of self-blame. In his research he described the way his participants,

'accepted the moral attribution levelled by the preachers daily on them, and at a time when they were grieving and struggling to regain enough courage with life, they began to scrutinise their behaviour for sinfulness'

This religious self-blame was, however, challenged by other participants who were critical of the local clergy and others in positions of authority in Rarotonga who publicly attributed the cyclone to divine intervention for the transgressions of the community, to the over-utilisation of pearl-farming, failure to attend church, and working on Sundays. As Ver Beek (2002: 75) reminds us,

‘if development is truly about strengthening people’s capacity to determine their own values and priorities, and to organise themselves to act on these, then researchers and practitioners must recognise the importance of spirituality in people’s lives, seek to understand it better, address it openly, and give the opportunity and power to decide how both development and their spirituality will and should shape each other’.

It is evident from the discussion above that religion factors strongly in the ways in which people make sense of hazard risk and disaster events in Samoa. Although largely absent from mainstream approaches to disasters, such understandings need to be acknowledged and understood in order to aid understandings of perceptions and social and cultural understandings of disasters.

An aspect of sense-making that I hadn’t initially considered was the role that humour plays in the immediate aftermath of disasters. In the midst of terrible situations many of my participants described the ways in which people would tell jokes or see the funny side of situations. Not only did they describe the use of humour in past disaster situations but also when talking about broader issues of disaster risk and preparation. Rather than seeing this as people not taking disasters seriously, it appears to be a way in which Samoans use humour to get through difficult times in their lives. Research by Taylor (2003) in Manihiki in the Cook Islands also referred to the ways in which in the immediate aftermath of Cyclone Martin participants referred to humorous situations during the cyclone, for example, one woman described swimming in a turbulent sea of polluted water alongside the pigs. Tufi described the humour people in Papa found in receiving aid packages following cyclone Val.

“there was a lot of laughs, they had food gifts coming in from New Zealand, from Australia, from Japan and they would bring it into this house and they were sharing it, and they were smiling about it, they were making fun about it, about the packs, it’s amusing to suddenly have to eat out of a roll call, so the poor, and you have five cans of vailani and canned fish and flour and oil and this...and I’m very grateful, I’m grateful...to have had a very good attitude towards natural disasters and stuff like that...it shows the very close nature of the people” (Tufi)

Tufi continued his description...

“Oh yes...it was tough for them...because after the cyclone there were still old people, old people in their seventies after two months, three months, they were still housed in the, in the water reservoirs that were broken down, some were still make do just roofing iron just tipping on the side of a tree and they were living under the shade there, and like I said, I you do not, you do not see the faces of distraught you know, and loss as you see in the world tv news, you know in the face of hunger, and war and as they do in these people, Samoans will always find a thing to laugh about in these hard times, and if there is a time that they will have together in their minds you know jokes to tell, this is the time and it's a wise thing just so that to pass the time and move them on.”

Clearly humour wasn't simply used because the situation wasn't serious enough for them to really be concerned, it appeared more a form of resilience which diffused difficult situations, brought people together and was used when telling stories of past disaster events (see Hereniko, 1994 and Sinavaiana, 1992, for examinations of humour in other Samoan/Pacific contexts).

Understanding the ways in which people make sense of disasters and perceive hazard risk is crucially important for furthering our understandings of vulnerability. People's understandings are highly heterogeneous because they result from their past experiences, values, beliefs and cultural and geographic contexts. It is not possible to understand vulnerability without firstly understanding the ways in which people make sense of risks and hazard events, and this needs to be taken into account in disaster research and planning. The following section will build on this section by exploring the hybrid nature of vulnerability and resilience.

Resilient Vulnerabilities – the hybridity of disaster risk

As stated at the start of this chapter, it is very difficult to distinguish between processes that make people vulnerable and those that make them resilient because processes are mediated by people's individual and social contexts. According to Jenkins (1996: 20),

'[i]f identity is a necessary prerequisite for social life, the reverse is also true. Individual identity – embodied in selfhood – is not meaningful in isolation from the social world of other people. Individuals are unique and variable, but selfhood is thoroughly socially constructed: in the processes of primary and subsequent socialisation, and in the ongoing processes of social interaction within which individuals define and redefine themselves and others throughout their lives.'

According to Jenkins (1996) all identities, individual and collective are constituted through the synthesis of self-definition and definition by others. It is also crucial to acknowledge that identities are not “static or stable, but rather shifting, multiple and contextual” (Teshahuny, 1997: 466. See also Weedon, 1997). Just as a single process can simultaneously increase vulnerability for some, while decreasing it for others, individuals are never completely ‘vulnerable’ or ‘resilient’, but display elements of both.

We cannot completely remove vulnerability from the equation, especially because often these vulnerabilities are the result of underlying processes beyond the control of the individual. As a political ecology approach argues the likelihood of disaster depends upon the social order, its everyday relations to the environment, as well as the larger historical circumstances that shape people's environments (Hewitt, 1997). But these vulnerabilities can be mediated by resilience, which doesn't negate the vulnerability that is still present but instead creates new hybrid spaces of resilient vulnerability where the two co-exist. The concept of hybridity has been developed by postcolonial and poststructural theorists (e.g. Bhabba) in order to destabilise identities and explore the ‘in-between spaces’. Latour (1999) argues that subjects and objects do not have fixed goals but become something and someone else, namely the hybrid actor. Actors can be human or non-human (for example elements of the natural environment). In non-human form the actor becomes an actant. According to Latour (1999), the actor-actant symmetry is what forces us to abandon the subject-object dichotomy as this distinction prevents the understanding of the collective. The aim of this section is to blur the distinctions between vulnerability and resilience in order to explore the hybrid ‘in-between’ spaces. Using examples from my fieldwork in Samoa, I argue for an alternative approach to understanding the concept of vulnerability.

Physical Location of Villages

The physical location of villages impacts on the vulnerability of its residents to hazard events, while at the same time the natural resources associated with geographical location can increase people's livelihood resilience. According to Oliver-Smith (1999b:26) all systems experience degrees of inherent vulnerability. For example, 'communities are often founded on the basis of proximity to resources, thus enhancing chances of survival, only to find over time that the same proximity to resources also involves proximity to hazards'. This is most certainly the case in Samoa where the majority of villages are located on the coast. There are numerous benefits associated with living along the coasts including: allowing people to harvest resources from the sea and shoreline (fish, shellfish etc.); providing people with relatively flat land for their homes and gardens; and the use of sea for transportation. The interior of the two main islands in Samoa are mountainous, and therefore less desirable for settlement.

Sapapali'i is not only at risk from sea-related hazards. It also has two rivers which pass through it that regularly flood, often closing the road for many hours. Until a few years ago both rivers needed to be forded and would regularly be closed after heavy rain. A bridge has now been built over the river closest to the centre of the village by Malo's store (see figure 4.1), but the river at the southern end of the village by Malama and Luafata's store is still only crossed by a ford which is regularly impassable (see figure 4.2). Laufata described the queues of cars that would build up outside their store during heavy rainfall, often for many hours. Traffic hold-ups are particularly disruptive given that Sapapali'i is only ten minutes north of Salelologa, the main service village on Savai'i, and that it is the only road north on the eastern side of the island.



Figure 4.1: River by Malo's store – now crossed by a bridge (Source Watson, 2006)



Figure 4.2: Ford crossing river at southern end of Sapapali'i (Source: Watson, 2006)

Although the risks posed by the sea and rivers are rather high, a large number of houses and associated buildings were located directly on the shoreline (see fig 4.3). Sene was aware of the risk in having her house build alongside the sea, and previous cyclones had severely damaged her house. However, although this created risks, it also provided her family with a constant supply of food from the sea, and the cool sea breeze made living conditions more bearable in the heat. Other families had cooking houses and meeting fale located on the shoreline. Many of these cooking houses (*umukuka*) were rather basic constructions that could be easily destroyed in heavy seas or storms.



Figure 4.3: Cooking house and other fale located immediately next to the sea, Sapapali'i (Source: Watson, 2006)

Human modifications to the environment in Sapapali'i also appeared to be both increasing and decreasing people's vulnerability. Many participants told me how they have cleared large areas of their family land of trees so that they can expand their

plantations. Unfortunately such deforestation is strongly associated with increased erosion risk due to decreased soil stability. Not only will this result in the loss of top-soil high in nutrients during heavy rain but will also increase the chances of land and mudslides which could have impacts on land below the plantations. However, by increasing the size of their plantations, families were increasing their earnings and thus their economic security, which was clearly increasing aspects of their resilience.

One intriguing practice I observed while in Sapapali'i was the removal of tree roots above the ground surface (see figure 4.4). This was particularly common on the pastor's property. I asked Letuala the reason for removing the tree roots and he explained that it was done so that people wouldn't trip over them when they were walking around the village.



Figure 4.4: Pruned tree roots, Sapapali'i (Source: Watson, 2006)

Although this seems a peculiar but logical practice it significantly decreases the strength of the tree roots, increasing the likelihood of them falling down in strong winds. Many of these trees were beside houses and meeting fale so it appeared to be a rather risky practice. However, it clearly illustrated the ways in which people perceived the everyday risk of tripping over tree roots of greater importance than the trees falling in strong winds.

Aiga Support & Village Responsibilities

“I’m grateful to have had a very healthy attitude towards natural disasters and stuff like that, it shows the very close nature of the people, the family unit, the nuclear and extended family are very, very close and the village community, I think that alone saves the people, even amongst the very families of the village it is a unity of its own” (Tufi)

In Samoa, disaster preparation is perceived as a family responsibility under the leadership of individual *matai*, rather than the village. The extended family unit and collective ownership of land and resources ensure that those most vulnerable are protected and provided for by more able members of the *aiga*. The responsibility for this provision of support lies with the *matai* who is the head of the family. The *matai* will commonly allocate tasks before and after the hazard event, and will make decisions immediately after the cyclone concerning the financial situation of the family. For example, after Cyclone Val the *matai* in Matalena’s family made the decision that none of the plantation crops were to be sold until the newly sewn crops were ready for harvest. The priority for any salvaged crops was to feed the family, rather than to earn cash at the market in Salelologa.

Having extended family in the village also increased the likelihood of having a secure place in which to shelter from cyclones. Some participants explained that their fale were not strong enough to survive cyclones but that they didn’t worry because they had family with houses that were stronger and that in a cyclone event they would go there to shelter.

Aiga support was not restricted solely to support from family within the village. Extended family overseas played an important role in disaster recovery, sending money and goods

such as food to their families in the villages. These remittances greatly increase people's resilience to disaster events ensuring the financial security of families during the period between replanting and harvesting crops (usually about six months). Such a situation illustrates the difficulties in distinguishing whether individuals are resilient or vulnerable, and the value of a hybrid approach to understanding vulnerability.

As a consequence of disaster preparation/recovery being largely the responsibility of individual *aiga*, in most villages, including Sapapali'i, there is no community strategy for disaster management (SPDRP, 2002). Such an approach can simultaneously increase vulnerability for small families within the village, especially families like Sene's which are made up of young children and grandparents (because those of working-age have migrated to Apia or overseas), while at the same time providing protection and insulation for members of larger families. It also makes it potentially difficult for government and NGO programmes to succeed if the village *fono* don't perceive disaster management as being their responsibility. As a political ecology approach to disasters argues, people's economic and political positions in society determine their vulnerability to disasters and (Bryant & Bailey 1997). Therefore the allocation of power within the village and within individual *aiga* has consequences in terms of people's vulnerability in hazard events.

Although this individual *aiga* responsibility is the ideal, the reality in disaster situations is that most families appeared to provide assistance to each other in various ways, and villages appeared largely self-sufficient. Self-sufficiency appeared to be a crucial aspect of reducing people's vulnerability to disaster events in Samoa (Paulson, 1993). This self-sufficiency includes food provision; the ability to get on with recovery rather than waiting for external help; and in some cases, decisions about relocating homes or villages to reduce future risk. As Tufi stated,

"Samoa does not see a cyclone as a disaster as New Zealand would see it, as Papua New Guinea, as Australia would, it is just an act of nature and we are nature's part and if the wind did that part we have a part to play. It's to replant and to go back to living, it's never lay down and, and cry out for somebody to feed you" (Tufi)

It is interesting to note that the above quote above alludes to the idea of both people and cyclones as part of nature. This suggests a hybrid understanding of humans and nonhumans and undermines a notion of cyclones as extreme external events, which ‘impact’ on humans (Latour, 1999). This is clearly a contrast to the ways in which disasters are conceptualised within western scientific understandings and the resulting disaster management strategies.

Although in many parts of Samoa families are no longer maintaining their plantations, instead relying on largely imported food and produce purchased at markets, families in Sapapali’i were largely self-sufficient, relying on food from their plantations (taro, ta’a’mu, meat, eggs) for their staple diet. This self-sufficiency is extremely valuable in the immediate aftermath of the cyclone. Rather than waiting for food aid to arrive, participants described one of the first tasks undertaken after the cyclones ended was to go to plantations and gardens surrounding homes to see what food could be salvaged, either for the family’s consumption or to sell at the market.

Once food had been salvaged, the next task was to clear the debris in the plantation and immediately start replanting crops. Some participants recalled their elders telling them that this was the most important thing to do after a cyclone. Evidence from Paulson’s (1993) research in Samoa supported this view. Her research revealed that two months after Ofa, most of the damage to the villages she studied had been repaired and the amount of taro planted was apparently greater than it had been before the cyclone. Tufi described his father’s resilience after Cyclone Val:

“my father never lost his heart, you know after the storm he said “well, we have no food so what do we do, we grow food”, so the first thing that was done was to look for planting materials and we were still able to save some of the shoots and the roots that were left and it was started. In six months we were eating bananas again. I remember it quite well, my father said, “plant, we’ll eat again. So long as there is earth there will always be food. Don’t worry about the winds, the winds will come when it wants to come and when it comes there’s nothing we can do about it” and that is the good thing about the island, the people of Samoa, well perhaps not all the people feel like that, I don’t know, it’s the way I think, I saw it, I grew up in that kind of attitude and

it's never gone from me, you don't just break down and, and cry and say "God, what have you done?", no, no you keep doing, you keep doing your bit"

This resilient attitude to disaster recovery extends beyond replanting crops to the rebuilding of homes and other village buildings. Although there has been a growth in the presence of *palagi*-style houses (largely as a result of government promotion of this style of house being safer), participants all said that Samoans had an advantage after cyclones because they knew how to quickly rebuild temporary fale. These are built in the traditional Samoan style and according to participants are the easiest and most appropriate forms of shelter to build after a disaster, especially given that there is never a shortage of timber, particularly as coconut trees are easily felled in the strong winds.

The village also takes responsibility for rebuilding community buildings such as schools. In Samoa it is the responsibility of the village to build and maintain school buildings, while the government pays the teachers' salaries and provides resources for the school. After cyclones Ofa and Val the Samoan government and external aid donors did provide assistance with the re-building of schools, but in Sapaali'i they rebuilt theirs themselves. This was because they perceived it as a sign of village weakness to ask for help.

Not asking for help can be simultaneously a source of resilience and vulnerability. At one level people pride themselves in their self-sufficiency and ability to get on with recovery without outside assistance and it can reduce aid dependency. Conversely, however, not asking for help can have tragic consequences if people's pride supersedes their need for assistance.

In the post-disaster context, the village *pulenu'u* (mayor) represents the village to receive relief supplied. Participants explained that there was great variation in post-disaster relief (and broader disaster mitigation activities) depending on how 'good' and 'clever' their *pulenu'u* was. Although many participants were happy with the *pulenu'u* in Sapaali'i, some felt that their *pulenu'u* was 'lazy' and didn't do much to help the village. According to one participant:

“I don’t think the pulenu’u’s doing much for the village, this is the only thing he does, just to make sure we’re cleaning up the village, but the developments of the village for the people to make money, he’s not good at that, not like other villages, other villages there are good developments and all good things like that, they have some small developments to get the money, but here I don’t think the pulenu’u’s playing a good role for the village people.”

Another participant alluded to similar problems stating:

“you know, the many villages they benefit from the government, a lot of aid from outside...the other villages benefit from that, they build schools and because of the matai, they play a good role...they push the pulenu’u to the government, and they go to the government and say “please, we need a good school building”, all the other villages they build their good school buildings but us here no, the school buildings are not good, I tell you that because you know as I said the pulenu’u is not good, not good brains, very lazy”

The lack of requests made by the pulenu’u to government is also likely to be linked to pride in self-sufficiency. Although some participants perceived the *pulenu’u* to be ‘lazy’, his lack of action may also be linked to the belief that to ask for help is a sign of weakness, as has been discussed earlier in this chapter.

It is interesting to note that both critical comments about the pulenu’u came from female participants. It was also more common for women to perceive the need for a greater level of disaster education and assistance at the village level. According the SPDRP (2002) report, village *matai* showed less interest in community-organised activities or training on disaster preparedness, and in both villages women were more likely to say they would like to have more training on disaster management and first aid. It is therefore evident that social structure within the village can simultaneously increase and decrease people’s vulnerability depending on the context of the village.

Relocating villages

A common way of decreasing the risks associated with coastal hazards (including climate change) is to promote the movement of people inland where they are further from the sea. Following Cyclone Ofa, residents of Papa-tai made the decision to move inland and build

a new village (Papa-uta), so that there was less risk of their village being destroyed by another cyclone. At one level this appeared to increase people's resilience to future hazard events, however, the relocation of families in many ways also increased people's vulnerability. Tufi described the way in which in the original village of Papa-tai, people lived "almost like one family", and that there was a great degree of sharing and reciprocity in their daily lives and interactions. After Ofa, money came into the picture in a way that it hadn't in the past. People had to completely rebuild and according to Tufi, people were more concerned with finding money first, rather than finding a builder and helping each other rebuild. The way he saw it, this breakdown in community was directly related to the increased distance between houses in the new village. He explained:

"it's a sociology thing, you don't see someone for a week you've lost him from your mind and, people are kind of being estranged from the others, they were not, sometimes they were not very, I thought there was a time they were not friendly with each other...that breaking down of community by the distancing of one from the other, the infrequency of meeting and talking as in comparison with what they were used to in the village when they, every night after the meal the kids will gather...and they will sing and play the guitar and the girls will gather in front of another building in the moon and, and chat and gossip and stuff like that, that was lost, you know and people were confined to each other, they were, the immediate family become more popular"

An additional challenge has been that since relocating inland, the village has had no permanent freshwater water supply and women have to travel large distances to wash their clothes because unlike their old village, they no longer have bathing/washing pools. It has been 17 years since Cyclone Ofa and the road down to Papa-tai still hasn't been re-sealed. Although the village itself is damaged it is still a very important part of the heritage of the people including the burial site of many ancestors. Tufi thought that it wouldn't take much for the government to clear the pools so that village people had somewhere to go to bathe and to do their washing. Doing this would help reduce aspects of vulnerability for residents of Papa-uta. This example illustrates the complexity of vulnerability, and the inability to distinguish between actions which increase vulnerability and those which reduce it, because in some circumstances, a single action can simultaneously reduce and increase aspects of vulnerability.

This section clearly illustrates the way in which vulnerability needs to be understood within the context of people's perceptions of 'risk' and daily priorities. If people worry more about ensuring that they have enough money for family needs and social obligations, then concerns about disasters will factor less in their everyday lives. The examples above illustrate the ways in which certain practices may decrease people's everyday vulnerability while simultaneously increase their vulnerability in a disaster situation. However, if we start to reconceptualise our understandings of vulnerability and resilience and the hybrid spaces where people's lives are positioned, we start to realise that in many instances it is more valuable to concentrate on increasing people's everyday sustainable livelihoods than solely in disaster events. If people have sustainable livelihoods, they are also more likely to be resilient in disasters.

Conclusion

What does re-thinking these concepts mean then, in terms of intervention? And what conclusions can be made from my research in Samoa? By more realistically depicting people's disaster experiences and understanding the ways in which they make sense of disasters (rather than solely focussing on physical recovery) disaster intervention can be undertaken in more valuable ways. As Harraway (1991) argues, we need to reorganise and combine situated knowledges and pursue scientific knowledge in a way that joins multiple knowers on the basis of affinities and builds joint, expanded understandings. By classing people as 'vulnerable' or 'resilient', we miss the vulnerabilities and resilience that they simultaneously possess. If we are to truly undertake participatory intervention then we need to ensure that we place people's disaster experiences within the broader context of their daily lives and the local and national development context. If we do this and acknowledge the hybrid 'resilient vulnerabilities' that exist, we are less likely to undermine people's resilience, while simultaneously addressing vulnerabilities in more meaningful ways.

Although it was apparent in my research that participants possessed a high degree of self sufficiency, and that some processes of development had undermined local coping strategies, there is still a place for disaster intervention. Based on my fieldwork in Samoa, I would suggest that just like more recent approaches to development practice, intervention needs to take be culturally appropriate, local intervention which builds on the resilience inherent in *fa'a Samoa* (Connell, 2007). This intervention needs to focus not only on physical re-building but also needs to acknowledge that ways in which people make sense of disasters in their everyday lives. To not do this is to merely stop-gap the problems and potentially reduce people's disaster resilience by undermining dominant coping strategies for example, religious beliefs. It is also evident that there is a need for further research which explores the ways in which people make sense of disasters, particularly in the Pacific context. The linkages between disasters and development will be explored in greater detail in the following chapter.

Chapter 5: Beyond ‘Natural’ Hazards – Disasters and Development in Samoa

‘the goal of sustainable development demands that we conceptualise development in the Pacific Islands in terms of the realities of people as they construct their daily livelihoods. This alternative approach to development concentrates on securing viable and sustainable livelihoods for people as a means to tackle poverty and approach environmental sustainability’ (Purdie, 1999: 65)

Introduction

On my second to last day in Samoa, Apia experienced significant flooding in many areas. This flooding closed schools and businesses and made headlines in the news. Locals I spoke to during this event all explained that although the floods were disruptive they had become a common event in Apia, especially during the wet season. Media reports explained that the flooding was a result of business developments in coastal areas of Apia and deforestation in the hills above the town (Ah Mu, 2006; Semu, 2006). This single event illustrated the competing government priorities of economic development and disaster management, and how attempts to develop could be undermining attempts to ensure resilience to natural hazard events and sustainable livelihoods (Hewitt, 1997; Ozerdem, 2003).

Disaster research is commonly undertaken using event-centred approaches, which make sense of people’s vulnerability in terms of the immediate disaster context (Allen, 2003). There is a risk in ‘event-centred’ approaches which tie vulnerability to natural events in analysis, of neglecting other facets of vulnerability and the links between them. Local people are subject to a far wider range of risks and stresses than those associated with natural hazards, and their coping strategies and perceptions of disaster risk clearly illustrate this (Burton et al, 1978; Bhatt, 1998; Allen, 2003). As Allen (2003: 180) states, ‘there is a risk in ‘event-centred vulnerability’ of neglecting forms of underlying

vulnerability that, unchecked, are likely to emerge as future causes of event or stress manifestations of vulnerability’.

This chapter argues for the need to move away from ‘event-centred’ approaches to disasters and vulnerability which often separate disasters from the broader development context, placing disaster management and development work in separate conceptual silos. As political ecology approaches to disasters argue, political, social, and economic considerations mediate the dynamic interactions between humans and their environment and resulting hazard risk (Hewitt, 1997). By acknowledging and engaging with critiques and alternative approaches to development we can explore the similarities in terms of criticisms of disaster management as well as aspects of alternative development approaches which may be salient in terms of disaster risk reduction.

Aid structures often tend to force agencies to ‘prioritise’, rather than creating conditions for a broad-based ‘culture of preparedness’ which would address the linkages between reducing vulnerability in disaster events and broader development goals. According to Christoplos et al, (2001: 194), the architecture of aid ‘generally creates activities within project structures that single out limited sets of activities within a specific timeframe, rather than situating such activities as an integral part of ongoing strategic thinking’.

Theorists and practitioners are slowly moving towards an integrated approach to cross-sectoral vulnerability reduction, which links disasters and development (Allen, 2003). According to Fountain et al., (2004), there is a close connection between increasing vulnerability to disasters and development in the Pacific. Although the division between disasters and development has practical value for government and NGOs, such distinctions have less significance for local people, particularly for those with low levels of livelihood security for whom ‘the difference between normal life and what outsiders define as a crisis may be marginal’ (Eade 1997: 166).

A common approach which bridges the divide between disasters and development is the *sustainable livelihoods approach*. Chambers and Conway (1992: 7-8) define a sustainable livelihood as one which can...

'cope with stress and shocks, maintain or enhance its capabilities and assets, and provide livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short or long term'.

According to Christoplos et al (2001: 191), a livelihood approach can bring disaster and development discourses together in a more dynamic manner than 'reiterating vague platitudes about disasters merely being an indication of underdevelopment'. Exploring how households/families combine risk mitigation/ recovery and livelihood sustainability can reveal the 'fallacies and limitations of the traditional categories of development co-operation and assistance' (Christoplos et al., 2003: 191). According to Power (2003: 181), some geographers have argued that 'the concept of livelihoods can also provide more nuanced understandings of rural development and can focus attention on the importance of place' (for example see Bebbington, 2000).

From the perspective of individuals in communities like those in my Samoan research, livelihoods, not hazard events, are the primary source of vulnerability. Local manifestations of vulnerability are linked to factors including land tenure patterns that may limit access to land; lack of livelihood opportunities for earning an income in the area; processes of environmental degradation; rising prices of basic commodities; and falling market values of local produce (Purdie, 1999). These different manifestations of vulnerability are too strongly interlinked in the lives of most individuals in the community to separate neatly vulnerability to cyclones or flooding, from other forms of vulnerability for example, economic security.

In such a context there are clearly problems with the imposition of western models of development which prioritise national economic growth and export-oriented production,

while social and cultural aspects of development are accorded little priority (Connell, 2007). As James (1993: 148) states:

'[b]y managing to carve out livelihoods and still create a satisfying way of life for themselves, many Pacific Islanders are effectively resolving the tension that has been evident in Western rhetoric over the last fifty years between the social and economic gains and losses of development'.

There has been a tendency to employ development blueprints on the Pacific which have been constructed in and for very different contexts (Purdie, 1999; Connell, 2007). The specific island contexts of the Pacific require an alternative approach to disasters and development which frames the problems in terms of the local rather than the global and which takes different approaches to those employed in larger more resource-rich and populous countries (Connell, 2007).

As outlined in Chapter One, development theory and practice has come under increasing criticism from both academics and development practitioners, particularly in terms of the ways in which it defines and maintain control over regions of the world and its technocratic top-down 'fixes' (Escobar, 1995a).

The increasing levels of criticism of dominant models of development theory and practice led to what has commonly been termed the 'crisis of development' and gave rise to the emergence of 'post-development' and 'alternative development' models. Alternative development emphasises the need for local conceptualisations of development and for locally-owned solutions to development challenges. Rather than rejecting development, these alternative approaches allow researchers and practitioners to 'rethink, restructure, and rework "development"' (Peet & Hartwick, 1999: 210). The re-thinking of development theory and practice also has valuable lessons for disaster theory and practice, which have increasingly come under similar criticisms in terms of approaches.

Like new approaches to development, disaster management and theory also needs to be locally specific and move away from top-down technocratic approaches to ones which

emphasise the importance of being locally-led. There also needs to be a move away from the dichotomised ‘reality’ where hazard risk and disaster events have been segregated and targeted separately from everyday life and development (Hewitt, 1995).

It was encouraging to see that the work of the Samoan Red Cross is starting to link disaster/climate change programmes with broader community development. Tala, Secretary General of the Samoan Red Cross, outlined the kind of work they are doing at the village level.

“we advocate the water quality... people will help take a look at taps and pipes...so these people to have a good water supply...we even try and give them seedlings to grow vegetable gardens or even pandanus. Pandanus is a plant that you can weave from, because we found out that they have the capacity within themselves, there’s women there who can weave and we thought that they may as well plant so that they can weave and sell these products to earn their living. So that’s a typical kind of thing we’re working on”

The Red Cross has worked with a small number of vulnerable communities who have lived without a sustainable fresh water supply all their lives. The Red Cross found these people after Cyclone Heta in 2004 and have built a water tank for each of the 23 families. The EU micro-project scheme has met 75 per cent of the project costs while the Red Cross met the remaining 25 per cent. This is an initiative they are planning on expanding to other region of Samoa with water security problems.

In the rural Samoan context, there are numerous aspects of people’s daily lives which increase their vulnerability in terms of livelihood security and this chapter explores three key aspects. The first section explores economic vulnerability and the ways in which attempts are being made to reduce this. These attempts include the creation of business ventures by some participants in Sapapali’i and the work of Women in Business Development (WIBD). The second section explores the role of the church as an institution in Samoa in terms of development and questions whether or not the church could be used more effectively as a tool in community development. The church has been strongly criticised in Samoa, largely because of the practice of donations and the financial

burden that it places on families. The section explores the implications of these donations on people's lives and the relationship between the church and its people. The church appears to be a largely under-utilised resource in terms of aiding community development. The third section of this chapter explores issues of environmental sustainability. This section explores the changing approaches/motivations for environmental management and illustrates the conflict between economic development and environmental protection.

Economic Development – Reducing ‘poverty of opportunity’ in Samoa

‘For small islands like Samoa, sustainability of livelihoods is becoming increasingly difficult and complex due to the effects of natural disasters, such as hurricanes and pressure on material and biological resources. Thus the need to sustain the semi subsistence and informal sector as an important source of employment. This, however, does little to improve the country's earnings for foreign exchange, hence the dilemma that confronts the country's leaders.’ (Muagututi'a, 2006: 46)

Samoa has traditionally had a ‘moral economy’, which is made up of non-market, reciprocal social relationships which guaranteed subsistence for all members of society. For this reason issues of poverty in the Pacific are often downplayed because of extended family support systems which ensure that people are always provided for, often through remittances. It was common for participants to link poverty with food security, rather than with cash income. As one participant, Tufi, stated: “the word poor was never a word in the language of Samoa, no one was poor, no one was starved, no one was hungry”. Although rural families may have sufficient food security, what they often don't have is adequate cash to provide for basic needs including water, power, school fees and basic grocery items. This lack of cash is an increasing problem as the demands of the cash economy have caught up with them and yet they continue to live a subsistence or semi-subsistence lifestyle (Tafuna'i, 2002).

Households in rural Samoa have been involved in market production of crops since the late 1800s with increased expansion during the first half of the twentieth century. More rapid growth occurred after 1945 when roads were extended to most villages, and today most families sell some produce at local markets or roadside stalls. This shift towards market relationships can intensify the vulnerability of marginal households and groups during periods of natural stress such as droughts or cyclones, particularly given that most families focus on a small number of profitable crops rather than the diverse array of crops characteristic of subsistence production (O’Keefe et al., 1976; Watts, 1983; Campbell, 1984; Paulson, 1993). The increased dependence on single cash crops and the displacement of food crops to less fertile, less accessible sites has accentuated vulnerability to cyclones in both Fiji and Tonga (Paulson, 1993). The inability to earn an income is coupled with the advent of neo-liberalism and the entry of many Pacific nations to the World Trade Organisation (WTO). As a result many people are forced to leave their villages in search of a cash income, either in Apia or by migrating overseas.

Because rural populations in Samoa are so isolated, families have largely relied on remittances from overseas family members for their cash needs (especially for larger financial commitments such as church donations, *fa’alavelave*, household goods and building repairs/construction). This lack of opportunities to earn a cash income has been commonly referred to in the Pacific as the ‘poverty of opportunity’. This term was first used in the United Nations Pacific Human Development Report (1999), which stated that:

“[the] encompassing image of poverty in the Pacific is poverty of opportunity.” People’s talents, skills and aspirations are frustrated and wasted, denying them the opportunity to lead productive and satisfying lives. “Poverty of income is often the result, poverty of opportunity is often the cause.” (in Tafuna’i, 2002: 1)

This poverty of opportunity was apparent in Sapapali’i. For Matalena and Naitua’s families, crops were grown primarily for family food, and they would only take surplus crops to the market, or if there was a particular need for additional money for the family. The produce that is taken to the market often fails to be sold largely because most families with stalls are selling the same produce. This dilemma was clearly illustrated

when I walked through Salelologa market, the main town on Savai'i, and saw row upon row of families sitting trying to sell their taro, ta'a'mu, bananas and cocoa.

Fluctuations in the global market also increase people's economic vulnerability, particularly when relying on primary cash crop production⁹ (Power, 2003). According to Matalena, coconut was the most profitable source of income for her family but they were currently unable to sell it as the factory in Samoa had closed. Some families also grew nonu and would sell the fruit to processors who sporadically passed through the village. As a result of the limited opportunities for income generation, these families relied on remittances for their major cash needs (e.g. church donations, building repairs, vehicles, appliances etc.) while most of their basic needs (school fees, power, water, basic grocery goods etc.) were met from the selling of their produce.

Although the inability to earn a sufficient income from cash crops meant that many families relied on remittances, some families in Sapapali'i had diversified their methods of income generation through the development of small business initiatives. There are numerous benefits associated with livelihood diversification, especially in the context of global neo-liberal policies which have lead to increased competition and trade liberalisation. Diversification approaches attempt to be 'dynamic', committed to several dimensions of sustainability and aim to bridge the gap between micro and macro, local and national/global (Power, 2003; Connell, 2007).

Malo's family had developed a business which included the largest general store in the village and a guest fale business which was predominantly used by government departments and agencies for conferences and training workshops (see figure 5.1). Malo's wife and daughters work for the business and they also employ ten additional staff from local villages. Therefore not only did this ensure economic security for his family but also provided other families with a way of earning an income without having to leave their village.

⁹ There have been significant worldwide declines in the price of primary products such as copra which have negatively affected Pacific economies (Overton, Murray et al., 1999)



Figure 5.1: Rosalote Fale, Sapapali'i (Source: Watson, 2006)

Malama and Laufata also ran a small store, the *maketi*, at the southern end of the village which sold basic supplies and produce from their plantation (see figure 5.2). Their plantation was predominantly for cash cropping and employed two local men who worked and lived on the plantation. The main crop grown was taro for an export order they have with a Tongan company. They export approximately 30 sacks of taro to Tonga each week and additional taro is sold at the Saturday market in Salelologa.



Figure 5.2: Maketi, Sapapali'i (Source: Watson, 2006)

Another common way of earning an income in Sapapali'i was through sewing businesses. Sene ran her sewing business because of her age and commitments to her grandchildren who lived with her. Her business meant that she could work from home and removed the stresses associated with having a plantation, including the fear of crops being stolen or destroyed in hazard events.

Falevi and his wife Tiresa also ran a sewing business in the neighbouring village of Fusi (see figure 5.3). It had initially been set up with loans from family members overseas that have since been paid off. When they had needed to upgrade their sewing machine due to the growing number of customers, Falevi went to New Zealand on a working visa to earn enough money to purchase a new machine. Falevi and Tiresa's situation in terms of setting up and expanding their business illustrates the ways in which remittances are more than just cultural exchanges, often providing opportunities to re-work the capitalist system through local/global connections (Connell, 2007). Falevi believed that their business provided them with a very good income and they had plans to expand the business further once they had saved enough money.



Figure 5.3: Falevi and Tiresa's Sewing Business (Source: Watson, 2006)

The above examples illustrate ways in which some families are attempting to reduce their economic vulnerability by diversifying their income generating activities. They also emphasise the important economic linkages beyond the village which have made many of these opportunities possible. Within this context of a small village, businesses culture and development are combined. These small businesses provide examples of the hybrid ways in which Pacific people are re-working understandings of development within a globalising world (Connell, 2007).

However, although these businesses have enabled them to increase their livelihood sustainability they still simultaneously displayed vulnerability. Malo relied on his plantation to produce food for his fale business and to sell in their store. Similarly Malama and Laufata's plantation was predominantly for cash-cropping. They sold a proportion of their produce at their *maketi* and also had a long-standing taro export business with a company in Tonga. Neither family believed that there was much that could be done to protect their plantations if a hazard event such as a cyclone or landslide occurred. If such an event did occur they would suffer a significant degree of economic hardship. Additional vulnerability existed because none of the participants who owned and operated businesses in Sapapali'i had any insurance to protect them against disaster events (fires, floods, cyclones etc.). Falevi said that he worried greatly about what would happen to his sewing business if a hazard such as a cyclone hit, but that at the moment they couldn't afford insurance because it was more important to build a new fale for their family. Malo also explained that not having any insurance was a big risk for his family's guest fale and store. At the time he was interviewed he was exploring different insurance options but stressed that insurance cost a lot of money so he had to be completely sure it was worth it before taking any out. These decisions were also a balancing act of short and long-term risks and priorities for families. Malo and Malama's families both had additional economic security as a result of their government jobs which would act as a buffer in a post-disaster context. Malo was employed by a government department as a school inspector and Malama held a senior government position in Apia.

Although some families had diversified their income generating activities, for other families this was not possible. Allen (2003) suggests that one way to address underlying vulnerability is through livelihood schemes. These schemes provide participants with an extra form of income to fall back on in the event of a failing in their primary source of income (e.g. coconuts or Taro in the case of Samoa). Perhaps the most significant livelihood programme being run in Samoa is the work of Women in Business Development (WIBD).

WIBD was founded in 1990 (at the time it was called Women in Business Foundation) as a non-governmental organisation with the aim of involving women in business. WIBD evolved out of the 1990/1991 cyclone situations and the taro blight which followed in 1994. There was an increasing realisation of the need for people to supplement their incomes through small business initiatives, and although WIBD originated in Apia, there were increasing requests for assistance from rural women. Another central aim has been to reduce people's need for overseas remittances. WIBD's success is largely as a result of their approach which develops capabilities that people already possess rather than trying to introduce new capabilities. As Adi explained,

“everybody talks about small business and everybody talks about what can be done in the rural areas, we can loan money to people; nobody stops to think well is there a market... the biggest issue for us from the very beginning was what business ideas are there out there for the people and then we realised that we had to go and create these ideas ourselves so that's where our focus was and so you'll find that before we go out and start talking business or talking any kind of income generation we have to go out and have a look first of all at what is available there of what we can turn into an opportunity before we even start talking business.”

For this reason WIBD has been very careful with the initiatives it has chosen to pursue. Their main projects are fine mat (*ie sae*) weaving, organic nonu, coconut oil and honey production. By tapping into niche markets, WIBD have ensured that they are producing good quality, high value products. WIBD do not have currently have projects in Sapapali'i, so a case study is given from Tufutafoe, a village on the Falealupo peninsula which suffered considerable destruction during cyclones Ofa and Val.

Following cyclones Ofa and Val and the Taro blight, many people in Tufutafoe were left without their regular incomes from fishing and farming. WIBD helped to set up fine mat weaving projects and other handicraft production that helped the local community regain their pride and self confidence (Schischka, 2003). According to Schischka (2003), the projects in Tufutafoe resulted in a number of positive outcomes for families. These included employment; supporting their *aiga* (which led to a reduction in the need for overseas remittances); the revival of traditional handicrafts; and an increased ability for people to contribute to the local church and community.

Economic vulnerability is a characteristic of life in rural Samoan villages like Sapapali'i. Although in the past families have relied on remittances from family in Apia or overseas, the changing economic situation has meant that increasing levels of cash income are needed, as well as a realisation that people need the ability to generate an income within the village itself (Schischka, 2003). Although the 'poverty of opportunity' makes earning an income difficult, I have outlined attempts being made by families and WIBD to increase economic security. If successful, these initiatives can result in a decrease in reliance on remittances and may also stem the flow of people leaving villages to seek employment in Apia or overseas.

Income generation projects such as those implemented by WIBD are starting to have a positive impact at the national level as well as for individual families. According to a recent report by the Central Bank of Samoa coconuts collected by many rural villagers have contributed to the decrease in national deficit (Jackson, 2007). The report stated that the merchandise trade deficit decreased by 9.8 million Tala to 36 million Tala in April, 2007. The improvement in export earnings was mainly due to the strong growth in earnings from nonu juice, a major focus for WIBD, and increases in earnings from fresh fish, coconuts and Samoan cocoa (Jackson, 2007).

Such attempts to reduce underlying vulnerability are crucial for broader understandings of disaster vulnerability which encompass everyday livelihood sustainability. Whether self initiated or opportunities arising from NGO initiatives like WIBD, giving people the

ability to earn an income in their community provides them with the basis for wide-reaching vulnerability reduction.

The role of the Samoan church in development

“...the churches here are not really focused like churches overseas are...you know, people are usually giving to the church rather than the church helping people out...you know the churches are a way of the people gathering together...but I mean their role in development I think here is very, very limited, if anything at all.” (Adi, WIBD)

The church is a central part of people's lives in Samoa and is reflected in the country's motto, *fa'ave i le Atua Samoa* (Samoa is founded on God). According to the 2001 Samoan Census, 99.5% of Samoans report nominal adherence to Christian denominations (Macpherson, 2004). Church involvement in Samoa extends well beyond simply attending church services on Sundays to include involvement in church groups, church related activities and service to the church and its pastors. Churches also play a critical role within the educational, political and economic spheres of villages and communities. A common response from my participants was that the church *is* the village. This is largely the result of the church taking over many of the functions historically played by village structures. In the case of Sapapali'i it was also the result of a village rule which prohibits the presence of any churches other than the Congregational church in the village. Although villagers are permitted to attend churches of other denominations in neighbouring villages, the majority attend the Congregational church and subsequently there is a strong unity between the church and village.

Since the arrival of Christianity in Samoa in the early 19th century, the church has been finely incorporated into the social system. The church is the beneficiary of family resources, time and remittances from overseas. Families donate financially and materially to church activities and the livelihood of the church minister. Although the ethic of sharing and reciprocal obligation is seen by many as their *tautua* (service) to God through the church, it has serious implications for family and village development.

Church offerings have been commonly criticised for imposing a financial burden on families, many of whom, earn a minimal cash income. The financial burden is further increased by the competition between families and between villages in terms of the total sum of donations and the size and elaborateness of their churches. According to the 2006 Samoan Human Development Report, financial contributions to the church amount to the largest of household expenditures nationally totalling \$1 million tala per week (Salele, 2006). Discussions with my participants in Sapapali'i confirmed that money for the church was the first cut in their monthly expenditure. As Matalena explained:

“if you’ve got 100 tala, so you give 50 to the church, each Sunday you pay that and then 20 for food, and 20 for power and 20 for school (so that’s the first thing when you have you money for the week, the first money that goes out is for the church)...yes”

It is evident that such practices have serious development implications in terms of livelihood security, particularly economic vulnerability. According to Macpherson (2004), the money contributed to churches in Samoa reduces the working capital available to individuals, families and villages. It also limits the ability of families to accumulate capital through savings. A lack of savings reduces the ability for private economic investment and for assets which could be used as collateral for loans. As Laufata explained,

“that’s the life we still live... we sacrifice ourselves for God, for the church...the families do not provide good food or anything, everything is for the church...that’s why we cannot do much to develop our own families...we give things to the church, some families are so bad, the children, their parents do not provide food for them, for the kids and everything, I feel sorry for the kids, but when it comes the donation for the church, oh thank you lord, give all their money to the church...I don’t think it help us a lot, you can’t strive for your own family to develop your own family, everything you give it away for the church”

In terms of disaster relief, the role of churches varies greatly. The general consensus from participants in my research was that the church was only involved in immediate post-disaster relief, commonly in the form of food donations. Similar research by Paulson

(1993) revealed that food was the main form of disaster relief provided by churches. In her study, the amount of food donated was greatest in the Mormon Church, where the food ultimately came from the church headquarters in the USA. Although Paulson's research provided evidence of assistance from the church it also revealed that the amount of gifts donated to pastors following the cyclone, far exceeded what was given by pastors to the congregation. When asked whether the church provided assistance following the cyclones, Laufata responded:

"No, because we are the people of the church, we received nothing from our main church in Apia, no nothing, they don't provide...the only thing we do for the church is to give, give, give. They don't do anything for us"

Matalena responded in a similar manner believing that although she didn't have a problem with donations, there should be a corresponding obligation for the church to provide in times of need like disasters.

"it's good if we donate this money for the church but the church should also provide for us...especially these kinds of disasters...I think they must provide, but, nothing, they do for us, all this money they build a church, their houses but nobody can stay in those houses, big houses in Apia, where the main church is, they build houses not for the people"

An element of this expectation of a reciprocal exchange of goods/assistance relates to the ways in which today, the church is in many ways, the village. In the village context *fa'alavelave* were never one-way exchanges of goods. Perhaps it could be argued that with the church assuming many of the roles historically played by the village *fono* and *matai*, cultural ideas and expectations (like reciprocity) are mapped onto these new institutions. Some participants also alluded to an element of shame involved in asking the pastors for help which meant that many families persevered without assistance rather than losing face by requesting assistance.

Although the potential of the church in terms of development work is largely underutilised (Solofa, 2002; Ver Beek, 2002; Macpherson, 2004; Fountain et al., 2004; Mulianina, 2006), as discussed in the previous chapter there is a need acknowledge the

role that religion plays in people's lives as an axis of people's identity. Rather than seeing the church as a barrier to development, I would argue that it is more valuable to see the church as a potential conduit for development programmes. According to Fountain et al., (2004: 323) the lack of connection drawn between religious roots and contemporary aid and development realities can partly be attributed to the 'fundamentally secular and materialist nature of the mainstream development industry'. It has also been suggested that the absence of explorations of religion in development theory/practice may also be because many examples exist of religious organisations that have used 'development' programmes in an attempt to manipulate and impose their perspective on populations (Ver Beek, 2002). However, there are negative implications of 'spirituality-avoiding programmes'. According to Ver Beek (2002: 71),

'spirituality-avoiding programmes weaken the capacity of individuals and communities to determine their own values and priorities. They fail to fully understand the people whom they wish to help and they also devalue the very thing which may give people strength and hope'.

There has been a more recent emergence of a religion and development debate starting to open up but this has largely focused on the intersection in African and Latin American contexts with the Pacific relatively devoid of such analyses (Fountain et al., 2004). Outlined below are some examples of ways in which development NGOs are working alongside the church in Samoa, illustrating the potential of the Samoan church in terms of positive community development.

The Samoan Red Cross has found that the church is an effective entry point into the villages when undertaking their disaster education work. According to Tala, Secretary General of the Samoan Red Cross, the Red Cross decided to go through church leaders because they are well respected figures in the community who could effectively get their message across to a wide audience. They also decided to undertake most of their training on Sundays because a large proportion of Samoans commute to Apia for the week, and only return to their villages for the weekends.

Working with the church has allowed their organisation to utilise the potential of church groups. Youth groups, which usually meet on Sunday evenings, have been a particularly valuable tool for the Red Cross, where the decision was made to train the young people in the village in first aid. The idea is that if all the young people have first aid skills, they can take these back to their families, ensuring that every family has at least one person trained in basic first aid.

Youth groups have also been targeted for their blood donation programme. The Red Cross initially negotiated with church leaders to see whether they could come and target the youth when they have their meetings after the evening church services. According to Tala, using the church as a conduit for development in this way is very unique. As a consequence of this, in 2004 they were asked to present their programme to a conference in China.

A common way in which the church is being linked to development in the Samoan context is through advocacy of environmental stewardship. The linkages between the church and environmentalism are common throughout many regions of the world (Tyndale, 2002). According to the 2006 Samoan Human Development Report (So'o et al, 2006b: 41), 'the church should commit itself to the protection of biological diversity and the preservation of natural landscapes'. Similarly, according to Tuivavalagi (2004: 145),

"the key to sustainable and holistic development in the Pacific Islands is for Christians (which make up the majority) to apply their faith and biblical worldview in activities of life including science, agriculture and environment"

Given the environmental problems facing Samoa, and the sphere of influence that the church has in Samoa, it could be used in a very effective way in order to promote environmental sustainability. The following quote from Faaeafaleupolu (2005) illustrates the way in which environmental sustainability can be expressed in terms of religious obligations:

'Are our people being educated to care for, respect and revere God's creation? It is my stated opinion that we Samoans are not showing our love, respect (fa'aaloalo/migao) to God if we continue to victimize the environment. We...Samoans must listen to the environment crying out for help...We are a country founded on God, yet we continue to be ignorant and disrespectful of the environment. This in effect means we do not truly love God'

Tufi explained ways in which he had tried to use his position as a pastor in order to promote environmental awareness in his village.

"when we first came here we could not walk through the back of these houses because of the trash...for a whole month we were engaged, my wife and I and the Sunday school, in just loading up all the washers, laundry machines, things that were dumped there... that's part of my preaching, that you cannot love God and hate the earth, it goes against the grain to say that you love God and you dump the plastic bags down...yeah and I tried to theologise and you know...I keep reminding them of Samoa 30 years ago, you know, take the trip back to Samoa you know what was it like then? It was a beautiful place...now it is not, they tried, we tried to revive the place"

I asked Tufi what his thoughts were on using the church as a way of getting environmental messages across to the people. He believed that it was an effective method explaining,

"it's the only place now where you can address these issues, because they are consistent, they come here every Sunday, and maybe two, three days of the week they are here and they are able to shut up and listen, it's the only spot where they don't talk back...at least at the church everybody shuts up while the preacher screams his lungs out... you have to identify these things with God and unless you do then they don't care. You tell them that's what you do, when you dump your nappy and you know put it in the bag there, you are putting it to God's face, you know, you tell them that and it's not good, try putting it in your own face you know what I mean"

Religion is no panacea in terms of development, and at times it can obstruct or undermine development, but aspects of it can complement and motivate positive development (Tyndale, 2002). The church has the potential to be a conduit for development advocacy, funding, innovation, empowerment and service delivery. It is, however, equally important to acknowledge that the institutional power of the church can have (and has had in many

regions of the globe) negative impacts including inciting violence, modelling hierarchy, opposing empowerment (e.g. ideas about roles of women and men), absorbing funding, and casting aspersions on service delivery (Tyndale, 2002).

The church's presence in Samoa is clearly impacting on people's ability to develop their own families and in many instances is resulting in economic vulnerability. It is likely that this vulnerability will persist for as long as offerings remain part of religious devotion. As the late Revered Sione Pula once said, "there is no poverty as long as all structural developments in the church stop and instead concentrate on its mission to save and love." (Kolia, 2006: 140). Churches play an important role in the community but clearly the way to sustainable livelihoods is to find a balance where obligations to the church do not become a physical burden to church members who are in the church to seek spiritual gratification.

In some situations religious beliefs can come in conflict with those of development agencies and may become a practical problem when religious leaders or institutions obstruct development or view it as a threat because it promotes western liberal secular culture and human rights, or when religious rhetoric is a veneer for other motives. Common issues include value conflict surround family planning methods such as contraception and abortion, HIV/AIDS prevention and implicit messages related to sexual morality and women's empowerment (Tyndale, 2002). The use of religious institutions as conduits for development is clearly not a simple relationship and the potential impacts of using the church for development programmes need to be carefully thought through to ensure that religious values/power will not undermine development goals. But, given the centrality of church to people's live in Samoa, further exploration of the potential of the church in terms of development would be valuable. This section has at least suggested some ways in which the church has the potential to be a positive tool for development in Samoa.

Linking Environmental Sustainability to Disaster Management

The expansion of economic activity and population growth as a result of economic globalisation is exposing a greater number of people and capital assets to natural hazards. When natural resources are not managed sustainably, cumulative environmental changes such as soil loss and degradation, groundwater pollution, deforestation (which leads to increased runoff potential), and over-fishing increases exposure of vulnerable communities to hazards (Adger & Brooks, 2003). Even with a low population growth rate of 0.7%, Samoa is experiencing increasing environmental degradation (Hardie-Boys, 1999; Boon, 2003). The devastation caused by cyclones Ofa and Val, coupled with the taro leaf blight, removal of mangroves for land reclamation and rubbish dumping have caused significant biodiversity loss in Samoa (Taule'alo, 1993). Environmental degradation has also resulted in socio-economic decline. Since seventy to eighty per cent of the population rely on marine protein for their daily diet, processes such as over fishing and mangrove destruction have caused a rapid decrease of marine resources in parts of Samoa, particularly those close to urban areas like Vaiusu Bay, Apia (Zann, 1991).

Perhaps the most difficult challenge for Samoa is the competing priorities of economic development (at a national and local level) and conservation goals (Boon, 2003; Ah Mu, 2006; Semu, 2006). At a national level the sentiment from the media and people I spoke with, seems to be that the government is prioritising economic development over environmental concerns. For example, while I was undertaking my fieldwork, an editorial was published in the Samoa Observer (Ah Mu, 2006: 13) which stated:

'For all the talk of concern about the environment and the negative implications on food security by damaging such a vital ecosystem as a mangrove area, it has more often than not, been slapped down in the list of priorities by projects deemed more pressing such as job creation and profit.'

At a local level attempts have been made to create conservation areas through community-based conservation projects. Often funded by overseas agencies these

projects have commonly faced difficulties as a result of families and villages facing the dilemma of attempting to maintain conservation aims while at the same time their economic sustainability relies on resources from the very same protected area (Boon, 2003). While long-term biodiversity goals are important, the sustainability of local people's livelihoods also needs to be considered to ensure that conservation attempts do not defeat their sustainable purpose.

In order to understand local environmental management, it is crucially important to explore people's perceptions of environmental issues. Kerslake's (2002) research explored the way Samoans view their environment, and revealed that ninety per cent of respondents did not think that the environment was a major concern for Samoa. Nearly 70 per cent of people viewed the Samoan environment as either good or very good. Participants were also asked what had made them change their behaviour towards the environment. Personal experience, especially living through hurricanes and seeing the effects of fishing practices like the use of dynamite on marine life and coral, were the main reasons for making changes in their lives (Kerslake, 2002).

In Sapapali'i, participants spoke of the changes that had taken place to their local environment over the past 20 or 30 years. They described the deforestation of plantation land for cultivation of crops, which was further exacerbated by the cyclones of the early 1990s which felled most trees in the area. Although replanting has taken place, the demand for timber for building projects, and the need to expand plantation land to increase family incomes, has meant that there is less forest cover surrounding the village than in previous decades. Although this decreases soil stability, thus increasing the risk of landslides and land degradation, most participants didn't perceive this as a problem, emphasising instead that it had allowed them to earn additional income through increased agricultural production. This was an example of the conflicting priorities of economic sustainability and environmental management which can simultaneously result in an increased risk of a natural hazard event, while at the same time increasing their economic resilience.

People also spoke of past practices (that were now banned) which had damaged the environment. These included the removal of mangroves along the coast, sand mining (that was being run as a business venture by a *matai* in the village), the use of dynamite and poisons for fishing, and the dumping of waste into the sea. Although some practices had led to degradation there was a general sentiment that people took greater responsibility for the environment in the past, whereas today they relied for more on the government to enforce environmental standards. Meleisia (2005: 84) uses his personal experience to make this point explaining:

‘There has always been a problem in my village, and in the past each household prevented erosion of the sea on the foreshore near their houses, by collecting large rocks and constructing breakwaters. However today it is left to the central government to address this problem, and the central government takes the problem to the international aid donors. The high ranking chiefs try to get the government to pay for the sea wall with aid to stop erosion, but families did this themselves in the old days.’

Tufi also noted this transfer of responsibility from individuals to the government in terms of environmental management, recalling the difference between environmental management while he was growing up in the 1960s and management today.

“people were very concerned with the environment, we were not allowed to dump waste into the sea, the whole seashore was swept, cleaned by the women’s committee, as part of their weekly responsibility, their routine and it was inspected every Saturday morning, when the women’s committee would walk the beach to see if there was any trash...and families who dumped waste would get a small fine, so the people were very much environmentally conscious, very much involved in nature...it was part of their life and they played their part of saving it quite seriously, more so than even now with all the environmental programmes introduced by both the likes of SPREP and the likes of agriculture...even the government is seriously getting involved to save the mangroves and the corals...back then they didn’t need to, people were naturally environmental people, they depended entirely on it for their livelihood and they were proud to do everything for it.”

The above quote alludes to the integration of social, physical and cultural systems in Samoa. Historically, according to Clarke (1990), components of the landscape were utilised in a careful manner based on the realisation that exploitation of one component of

the environment could jeopardise the basic livelihood system a community relied upon. Clark (1990) also outlines the way in which Pacific Island communities view themselves as connected to nature and that therefore nature needs attention, grooming, and care, as people do. For example, plants are placed near to a village in such a way that they may be appreciated by those who pass by; they are not merely arranged for their utilitarian value.

Interviews with participants suggested that the reason for their changing environmental habits was largely as result of the law changes made by the Samoan government. When asked what environmental management practices were taking place in the village Laufata responded:

“the government can enforce us not to do things, not to throw rubbish...cos it’s the law, not to throw things, for litter...the only thing that you know the matai, the village fono do is to encourage people to develop, and to clean up the village and that’s the only thing”

Her perception was that the local village *fono* did very little in terms of environmental management and that any changes that had taken place were a result of law changes. Matalena explained local environmental management in a similar way.

“no one can throw the rubbish in the sea...the government encourages us, so we have to protect our sea, we have to protect our corals and not pollute them so if the police or someone or some elder in the village they have their duties, all of us have duties for that... we have a Samoan kind of like dynamite...it’s from the roots of a tree...so we can kill the fish with it...we stopped it, if the police found you, if they found me doing that so they take me to the police station...so the government encourages us, they check up on the sea, on the corals...and the mangroves...so we’re all encouraged by the government to make sure they survive”

Although the majority of environmental management at the local level is the result of national government decisions, some changes were economically motivated. For example, when discussing water conservation, participants explained that their incentive for conserving water was cheaper water bills, rather than being motivated by environmental concerns.

Although most directives came from the Government in Apia, some changes had been made by local people in the village. At the southern end of Sapapali'i is an area of mangroves which were being destroyed by pollution and by being cut by families for firewood. A decision was made by the village, especially the families whose land bordered on this area to forbid people to cut the mangroves. Malama explained that the village *matai* also made an application to MNREM for assistance in conserving the mangroves because they knew that this was a priority for allocation of aid from the department. At the time of undertaking research, they were still waiting for a response from the department, even though their letter had been sent many months earlier.

Conclusion – Disasters and Development Linkages in Samoa

'(To)...embark on a pathway that makes communities safer from disasters over the long term, disaster-risk reduction must not be considered as related to only extreme, low-probability events. Similarly, single or one-off actions rarely work because the tasks cannot be done once and then forgotten, nor can they be separated into their own isolated realm, activities or deliverables. Instead, disaster-risk reduction must be part of day-to-day practice and livelihoods, as a process, an attitude, a paradigm, a value and a culture. Thus, risk reduction would become the norm within the continuing development and sustainability processes.' (Kelman, 2004: 42)

This chapter has outlined the ways in which conceptualisations of disaster management need to be placed within the broader context of development processes and vice versa in order to ensure that development goals/projects don't undermine the very sustainability they are aiming to achieve. This chapter has explored the ways in which aspects of people's daily lives which would usually be ignored in 'event-centred' approaches to disasters, impact on people's livelihood sustainability and therefore also impact on their vulnerability to hazard events. Not only do we need disaster strategies that encompass broader development goals, we also need explore the ways in which dominant neo-liberal discourses of development are impacting on hazard risk. It is also important to make

people aware that actions in their daily lives contribute to their vulnerability and resilience in hazard events. As Scheyvens (1999: 63) states:

'If the predominant development discourse in the region proclaimed that Pacific Island peoples are important, they have valuable skills and traditional knowledge which can contribute to sustainable futures, they will be in a better position to draw on what is useful from the past and incorporate it with what is of value from the present, rather than being tempted to sideline their own belief systems for the sake of adopting the 'modern'.'

Effective and sustainable development strategies, which encompass disaster vulnerability reduction must be developed according to the local contexts of people's lives (Connell, 2007). They also need to move beyond the 'project approach' to development and disasters. As Overton, Scheyvens et al., (1999: 263) state, the very idea of a 'project' suggests:

'that the society, economy or environment to which it is applied is bounded in space and time, and that it can be managed and controlled as a system. Given the great complexity and diversity of societies, cultures and environments, the widespread networks and interactions people have as a livelihood necessity, and the apparently seamless contiguity of social and ecological life, we believe this assumption is seriously flawed'.

Overton, Scheyvens et al. (1999), suggest the need for a move away from seeing development projects as bounded objects to viewing them as a process which is only a small part of the broader process of change and adaptation in local contexts. By linking understandings of disaster risk/events to people's everyday lives, and by learning from critiques of development and new alternative approaches to development theory and practice, more meaningful approaches to disasters can be undertaken which ensure that development goals do not undermine the very livelihood security development projects attempt to protect.

Chapter 6: Linking Disasters and Development: Research Scope and Conclusions

Introduction

Building on a growing body of critical disaster and development literature including the use of political ecology approaches, this thesis has explored the ways in which disasters are more than ‘natural’ events and examined the ways in which they are socially constructed, resulting from human actions, rather than ‘freak natural events’. Using Sapapali’i as a local case study, this thesis has examined through interviews and participant observation, the ways in which social processes intersect with hazard events, in an attempt to understand how disasters are conceptualised and experienced at the local level in Samoa. It has also explored the interrelatedness of disasters and development. The thesis was arranged around three key areas: the gendered nature of disaster experiences; re-conceptualising ‘resilience’ and ‘vulnerability’; and the intersection of disasters and development.

While much of disaster management focuses on technocratic solutions to reducing disaster vulnerability, this thesis has emphasised the importance of social processes in reducing/increasing people’s vulnerability in hazard events. Central to this is a need for increased understandings of the ways in which people perceive risk and make sense of disaster events. For example, it was common for participants to make sense of disasters in terms of religious beliefs. However, the importance of religion is often overlooked by disaster and development agencies (Chester, 1998; Homan, 2003; Chester, 2005).

With the emergence of alternative development theory and practice there is an emerging body of literature on religion and development which contributes to the exploration of disasters and religion. Exploring religious explanations for disasters allows researchers to

help make sense of the ways in which people make sense of the world and events in their lives (Ver Beek, 2002). Samoa is a strongly Christian country and as this thesis has illustrated, religious explanations were commonly used to explain past disaster events in people's lives. As Homan (2003) argues, it is only by understanding deep-rooted beliefs like religious understandings and the resulting causal mechanisms that influence how people make sense of the world that culturally acceptable solutions to disasters are likely to be adopted. This is not to argue that people's faith alone will save them in the face of a disaster but that more fluid understandings of disaster perceptions and meanings facilitate a 'depth of understanding that allows for the exploration of the idiosyncrasies and subtle changes in society that influence disaster perception' (Homan, 2003: 153).

This thesis has also explored the relationship between religious institutions and disaster and development practice. According to many Pacific scholars, the church in Samoa is largely underutilised in terms of development (Solofa, 2002; Ver Beek, 2002; Macpherson, 2004; Fountain et al., 2004; Mulianina, 2006). In some situations religious beliefs can come in conflict with those of disaster and development agencies and may become a practical problem when religious leaders or institutions obstruct development or view it as a threat because it promotes western liberal secular culture and human rights, or when religious rhetoric is a veneer for other motives. Previous chapters have shown for example the ways in which financial obligations to the church can negatively impact on family and community development.

The use of religious institutions as conduits for development is not a simple relationship and the potential impacts of using the church for development programmes need to be carefully thought through to ensure that religious values/power will not undermine development goals. But, given the centrality of church to people's live in Samoa, further exploration of the potential of the church in terms of development would be valuable.

Community resilience to hazard events and community development are highly interrelated. For this reason it is more meaningful to address disaster risk within broader development priorities (Wijkman & Timberlake, 1987; Smith, 1992; Cutter, 1993;

Hewitt, 1995; Peacock & Ragsdale, 1997; Anderson & Woodrow, 1998; Quanterelli, 1999; Bradshaw, 2002). Linking problems associated with dominant approaches to development to those of disaster management, this thesis has explored the potential for 'alternative development' approaches to also positively contribute to the field of disaster studies. Drawing on recent debates on the connections between disasters and development this thesis has argued for a move away from event-centred approaches to disasters to longer term sustainable livelihoods approaches. If people are secure in their everyday lives, for example, having the ability to earn a sufficient income, they are more likely to be able to recover from a hazard event and less dependent on external assistance. The work of WIBD is one example of a livelihoods programme which by providing people with income generation opportunities is also reducing people's economic vulnerability to hazard events.

As a political ecology approach argues, vulnerabilities to disasters are never equally distributed (Hewitt, 1997). This thesis examined the ways in which understandings of gender roles and responsibilities impacted on the disaster experience. This chapter of the thesis built on the international gender and disaster literature which highlights the ways in which gender is often overlooked in disaster planning and research (Blakie et al., 1994; Myers, 1994; Enarson & Morrow, 1998; Delaney & Shrader, 2000; Enarson, 2000; UNDAW, 2001). Although there is a growing body of international literature, very few studies have been undertaken in the Pacific. Drawing on dominant understandings of masculinity and femininity in Samoa, which are commonly understood in terms of 'roles', this thesis examined the ways in which gender intersected with people's disaster experiences. During cyclones Ofa and Val my participants simultaneously conformed and transcended normative understandings of gender and work in the immediate disaster context according to which was the most efficient way of allocating tasks. This thesis argues that by expanding our examination of gender identities in disasters to explore the multiple subjectivities adopted by people in disaster events, we can start to understand the fluidity of the disaster experience and reduce the risk of essentialising the experiences of men and women (Cupples, 2007).

Methodological Implications

Undertaking research in Samoa, especially in Sapapali'i, where I was the only *palagi* in the village, allowed me to reflect upon the intersubjectivity of the research process, and the constant negotiations, both formal and informal, that took place between me and my hosts and participants. No amount of reading could have prepared me for the negotiations that took place in the field, and although my preparation did provide me with valuable tools, while in the field I had to be adaptable and open to the ways in which circumstances led my research in new directions or presented me with obstacles that I needed to overcome.

As this was my first overseas research experience, in a context which was culturally different and where people spoke a different language, I found myself constantly aware of my positioning within the research process. Chapter three outlined key methodological issues which I had to address including issues of positionality and reciprocity in the field. Perhaps the greatest learning in terms of methodology was the acceptance of my inability to separate my identity as a researcher from my identity as an everyday person living temporarily living in the village.

The negotiation of my sexuality in the field illustrated this dilemma of attempting to artificially separate these two identities in order to successfully undertake my research. On reflection, although this was a necessity given the context of my fieldsite, my research experience showed that research paralysis was far more likely to result from assuming that my sexuality wouldn't matter in the field, than dealing with the fact that it would; and it was only with time and reflection that I realised the impact it was having and was able to move forward. Bringing such experiences out into the open ultimately helps broaden the debate about reflexivity in fieldwork by problematising aspects of our identities as researchers which have traditionally been assumed to be uniform in the context of fieldwork (Lewin & Leap, 1996).

Although researchers commonly reflect on positions such as: ‘privileged’, ‘white’, ‘western’, ‘male’; the sexuality of the researcher and the impact that this has on fieldwork has received much less attention until recently (Kluick, 1995; Lewin & Leap, 1996). However, with the more recent reflexive turn in social sciences there is an increasing awareness of the need to explore the implications of sexuality in fieldwork (although this is more commonly explored by anthropologists than geographers – for exceptions see: Sparke, 1996; Cupples, 2002). Although much anthropological/geographical research has focused on sex and sexuality of ‘others’, there has been a relative silence with regards to issues of sex and sexuality of the researcher while in the field. The process of reflexivity and the explorations of our sexuality and other aspects of our identities as researchers, allows us to examine the multiple ways in which they impact on our research, without paralysing ourselves in our fieldwork.

Research Scope and Implications for Development Practice and Research

While undertaking this research it became evident that there was an absence of qualitative research on disasters in the Pacific. The Pacific disaster literature is largely dominated by technocratic/scientific research which focuses on the physical processes of hazard events and largely technocratic solutions to vulnerability reduction. As a consequence there was very little research exploring the social dimensions of disaster experiences. By exploring similarities and differences between the international disaster and development literature and my research in Samoa, this thesis has illustrated the ways in which disaster experiences and understandings of ‘development’ are highly context dependent and the danger of applying ‘blueprints’ from other regions of the world on Pacific nations (Connell, 2007). This section will briefly consider the contribution my thesis can make to disaster and development practice/literature and possibilities for continuing various aspects of this research, either in Samoa, or in other parts of the Pacific.

Disasters and Everyday Lives

Just as critiques of development theory have led to alternative approaches to development practice, this thesis has built on the emerging disaster and development literature and argued that it is possible for these lessons within the field of development and new approaches to be applied to aspects of disaster management. Alternative development argues for the inclusion and empowerment of local people in terms of development direction and decisions so that approaches are relevant. This approach is highly transferable to disaster management approaches. My research in Samoa has illustrated the ways in which understandings of disasters are context dependent. People make sense of disasters and hazard risk within the broader context of their everyday lives and priorities. As a consequence, for many of my participants, disaster preparation was something that they only thought about when cyclone warnings were issued. The rest of the time it was worries about having enough money for school fees and church donations, mats for *fa'alavelave* ceremonies and other challenges of everyday life in the village which were more likely to impact on people's livelihood vulnerability.

If we start to shift our focus away from event centred approaches to disasters to seeing disaster vulnerability in the context of people's daily lives and livelihood sustainability vulnerability reduction projects undertaken within the field of development in Samoa, for example the work of WIBD, are clearly beneficial in terms of reducing people's vulnerability in a disaster event. Allen (2003) suggests that one way to address underlying vulnerability is through livelihood schemes. These schemes provide participants with an extra form of income to fall back on in the event of a failing in their primary source of income (e.g. coconuts or Taro in the case of Samoa). Taking a livelihood approach to development can help bring disaster and development discourses together in a meaningful way and also help reveal the limitations of both development and disaster practice in terms of reducing vulnerability.

A central focus of increasing people's livelihood security was providing people with a regular income. Not only do programmes like WIBD increase people's everyday livelihood security they also provide families with the ability to accumulate savings in a bank account which can be accessed after a disaster event, reducing the need to rely on

family overseas. For some participants, additional money earned through small businesses was being used to improve their homes in terms of safety standards, thus reducing their vulnerability in a disaster event. This thesis also outlined the ways in which Red Cross disaster programmes are linked to broader development goals, for example the provision of vegetable seedlings and Pandanus to families so that they can increase their ability to make a living in the village.

Given the success of livelihood programmes like Women in Business Development, and the broadening scope of approaches to disasters by agencies such as the Red Cross, it would be valuable to further explore the intersection of disaster and development fields in Samoa and the Pacific region. This will not only ensure that agencies are not doubling-up or undermining each other in their work, but a longer-term livelihoods approach to disasters will ensure that people are more equipped to survive and recover from disaster events.

The Hybridity of Resilience and Vulnerability

Not only is there a need to move beyond event-centred approaches to disasters, there is also a need to re-conceptualise the ways in which we understand the concepts of vulnerability and resilience. As Chapter Four argued, rather than seeing vulnerability and resilience as either/or concepts it is more valid to take a hybrid approach which acknowledges that people are not straightforwardly resilient or vulnerable, but instead simultaneously display elements of both (Paton, 2006).

A single disaster event or process can have significantly different impacts on people, even if on the surface they appear similar. For example, although most of my participant's houses were flooded during cyclones Ofa and Val, participants adopted different subjectivities when speaking about this. Some participants saw it as a relatively minor and expected consequence of the cyclones, while for others it was a major cause of financial and emotional stress. Consequently it is of little value to attempt to distinguish between processes that increase vulnerability and those that decrease it, because people's individual contexts mediate these processes in different ways.

Not only did disaster events impact differently on different people, each participant also displayed elements of vulnerability and resilience, illustrating the need to transcend dualisms and deconstruct the binary categories of ‘resilient’ and ‘vulnerable’. As Tesfahuny (1997: 466) argues, identities are not “static or stable, but rather shifting, multiple and contextual”. Participants spoke of their experiences from positions of vulnerability and resilience, often simultaneously displaying elements of both and illustrating the shifting and contradictory nature of people’s subjectivities (Weedon, 1997). For example, Tufi’s father showed resilience in the face of the cyclone protecting his grandchildren as was to be expected given his role as a male and an elder. However, Tufi’s conversations with his father after the cyclone had passed illustrated the ways in which he was clearly vulnerable. Tufi believed that it was the hardship of the cyclone which ultimately led to his father’s death several months later. According to Jenkins (1996) all identities, individual and collective are constituted through the synthesis of self-definition and definition by others.

Disaster Memories – more than simply interesting stories

Although disaster events may have passed, there are multiple ways in which people continue to remember and be reminded of past disasters and that they live in a disaster prone environment. However, disaster memories of communities have not received much attention from hazard researchers (Mitchell, 2000). As researchers we need to be aware of the ways in which disasters remain in the landscape both physically and through stories and memories and the ways in which they still serve as important societal referents and yard sticks for policymakers (Mitchell, 2000). Each section of this thesis has included aspects of people’s memories of disasters and participant’s stories cannot be removed from their geographic location. These ‘reminders’ can include – ruined buildings; rebuilt or new buildings that remind them of the destruction that led to their construction; disaster survival buildings, like the Red Cross emergency store just north of Sapapali’i in Tuasivi; physical scars in the landscape; stories of survival or hardship; signs (like the ones advertising a World Bank disaster reduction project north of Sapapali’i); and even the presence of disaster ‘experts’ and researchers like me in the landscape.

Although it is often assumed that people ‘move on’ and ‘get on’ with their lives after disasters, the events and impacts live on in numerous ways in their lives and impact on people’s subjectivities in future disaster events. Through my research I came to realise the numerous ways in which people remember and are reminded of cyclones Ofa and Val. Malo spoke of his guest fale and how cyclones Ofa and Val have helped him test the strength of his foundations; Laufata could point to the breadfruit tress that were replanted after Val; Sene could show the marks inside her house which were the result of the mud which filled the bottom storey of her house during Ofa and Val. The sea walls and bridges that had been built in the village were a reminder of attempts to strengthen the ‘village’ and new ‘palagi’ style houses have or are being built by most families so that homes are not destroyed during future cyclones.

While many examples were reminders of the destruction of the cyclones, others, like the church in Sapapali’i served as symbols of the strength of the village in the face of a hazard event. While the church was being re-built Cyclone Olaf was on course to hit Samoa and was expected to be a very destructive cyclone. However, at the last minute it changed its course and crossed Rarotonga, leaving a trail of destruction instead. The villagers believed that their prayers had resulted in their church being spared destruction. This story of their faith in God and his sparing them of destruction was commonly shared with me when speaking to people in the village about disasters.

The above examples are signs and signifiers of disaster events and risks which may not be initially obvious to an outsider but which act as reminders to participants of the damage that was wrought by the cyclones. As researchers we need to be aware of the different ways in which people make sense of disasters and also be aware of the ways in which disaster memories persist well after the events have passed. As Steinberg (2000: 201) and other historians emphasise, we need to ensure that past disasters are not disconnected from the present context. In such circumstances ‘the politics of forgetfulness’ becomes a dominant influence on human responses to environmental hazards (Mitchell, 2000). There is a need for careful attention to interpreting past disaster

events because ‘clear-eyed assessments of previous experience are a *sine qua non* for future action’ (Mitchell, 2000: 46).

Re-thinking Development in the Pacific

“big scale development horrifies me, I mean there’s a school of thought in this country that we were only successful in agriculture when we had the big German-run plantations, let’s go back to that, and we say no... let’s just stick with what we’re doing, so that will be a challenge” (Participant – Apia)

If we start to move away from event-centred approaches to disasters and re-conceptualise them within the context of people’s everyday lives and broader development processes, development and disaster practitioners can make more meaningful contributions to reducing people’s vulnerability to hazard events. This thesis can be viewed as a local case study of disaster experiences and their linkages with broader development processes in Samoa.

Rather than applying blueprints from other regions of the world which assume cultural homogeneity, the Pacific would benefit from further research which examines the variety of attitudes and experiences of disasters and development within the region. The specific island contexts of Pacific nations mean that alternative approaches to disasters and development are needed, ones that are informed by local rather than global understandings. This will help ensure that disaster and development practices in the Pacific are context-dependent and do not undermine the very things they set out to achieve. This final section builds on existing literature and fieldwork examples in order to re-think development futures in the Pacific.

Pacific island states like Samoa have been subject to what Connell (2007: 116) calls a ‘passing parade of paradigms’ imported from other regions of the globe and unsuccessfully imposed on Pacific nations. As well as failures resulting from applying strategies developed in other regions of the world, Pacific Island states, including Samoa,

face a number of difficulties in terms of development because of their geography. The Pacific region spans a quarter of the world's surface and most nations are small, often made up of multiple islands and have historically been geographically isolated. Pacific Island states have been increasingly incorporated into global systems through media, internet, migration, trade, aid etc. in what Kempf (1999) describes as a 'cartography of compression' or with reference to internet connections, 'cyber-polys' (Morton, 1999). However, despite this increased connection with the world beyond the Pacific, significant development difficulties still remain. A combination of colonial legacies, geographic fragmentation, diseconomies of scale, limited natural resources, significant trade deficits and external resource exploitation have meant that development in the Pacific has been difficult to achieve (Bonnemaison & Waddell, 1997; Rumley et al., 2006; Connell, 2007).

As outlined in this thesis a recent development tool in the Pacific has been the adoption of neo-liberal economic policies and the introduction of free-trade policies. According to Connell (2007: 119-120), these have become the 'new panacea' for Pacific development. However, given the development difficulties stated above, most Pacific nations have little to trade and very few markets. Adi described the difficulties that WIBD face in terms of finding markets for their products,

"we're just very small isolated communities and we produce small quantities of product and if we're looking at the export market, which is the only market we can really look at when we're a small country just you know, there's no way export markets overseas are going to look at us because sure we might be able to give them something this month but when they come back next month for the same amount we're going to say, well we don't have any."

Research in the Pacific confirms that export diversity in the region is low and declining (Connell, 1991; Connell & Souter, 2007). Although there appears to be an increasing concern for broader development goals: e.g. poverty reduction, gender equity, Connell (2007) argues that these concerns remain 'minor considerations compared with an 'overriding commitment to unrestricted economic growth'. This dominant discourse of economic development and potential problems associated with it in terms of benefits for Samoans was alluded to by some participants, for example the quote from a participant in

Apia at the start of this section. Similarly Tufi believed that the Samoan Government was focused on employment and profit and as a result Samoan culture is being undermined.

Despite the pervasiveness of neo-liberal agendas and the isolation and relative powerlessness of Pacific nations within the global context, alternative possibilities do exist in terms of development. I would argue, as Connell (2007) has, that development in the Pacific needs to be understood in a way that makes culture central to understandings/re-workings of development. With the growth of alternative development and post development theories/practice there has been a growing recognition that culture is an essential element that development has to take seriously (Skelton, 1996; 2000; 2003; 2004; Tucker, 1997; Skelton & Allen, 1998; Allen, 2000; Schech & Haggis, 2000; 2002; Radcliffe et al., 2005; Skelton, 2007). As Skelton (2007: 137) states,

'cultures are not fixed or static: if it works for local people's lives and creates better realities, then culture will bend and flow to create the best fit; it will hybridize and it will create a syncretic space in which new possibilities can emerge'.

Within the Pacific region, culture is often contrasted with development rather than being seen as interrelated concepts (Hooper, 2000) and the 'cultural turn', commonplace in many regions of the globe, has been almost totally absent from the discourses of development planners in the Pacific (Connell, 2007). Culture is often seen as a brake on development rather than a condition of development and a means of achieving positive development outcomes.

However, as Connell (2007) states and aspects of my research illustrate, culture and development have been combined in many contexts and that these combinations show the hybrid ways in which Pacific people are re-working understandings of development within a globalising world. These re-workings include the role of remittances, migration and the re-working of capitalist economic processes and all are strongly linked to local/global connections.

Capitalism within the Pacific is central to the evolving hybridity of cultural and economic development processes. Local people re-work ‘western’ ideas of a cash economy within their own local cultural contexts and domestic considerations of how people relate to each other (Connell, 2007). For example the *ie sae* weaving programmes of WIBD have simultaneously resurrected weaving traditions that were being lost while simultaneously providing families with cash incomes. Remittances too need to be seen as more than simply cultural exchanges. They are also important contributors to investment. For example, in my research remittances helped some families with the setting up of small businesses, the purchase of modern goods, improving housing etc.

In the Pacific development context it is impossible to distinguish between the social and economic, past and present and local and global within such a trans-national context. Migration is a very good example of these connections. According to Hooper (2000: 9), migration is ‘an exercise in pure textbook economic rationality’ as remittances sent back to the islands contribute to investment/purchasing of goods. However, they simultaneously allow the maintenance of culture through ceremonial exchanges and complex displays (Connell, 2007). The families of all my participants in Sapapali’i had members who had migrated overseas and were regularly sending money back for cultural obligations and household needs. In return, families in Sapapali’i commonly provided goods for family overseas, including sending fine mats for ceremonial exchanges in weddings and funerals. These interconnections and social networks which span the globe produce a situation where according to Robbins (2005: 8) the ‘deterritorialization and Westernization that are supposed to deliver the *coup de grace* to “integral” cultures actually serve to secure their continued existence’.

Within the contemporary Samoan and broader Pacific context development is clearly being locally re-worked and re-shaped by specific cultural contexts. Although it is often at variance with the type of development strategies imposed from outside the Pacific, as Connell (2007: 130) states this kind of reshaping and restructuring,

'sits more easily in nations with very different cultural characteristics, with outcomes that ensure some degree of continuity with a not so distant precolonial past and that are more in harmony with perceptions of development centred on basic needs with real meanings in local lives'.

It is evident that given the fundamental importance of cultural contexts in terms of development, no Western model will be of worth in terms of development (Sahlins, 2000). Instead, Samoan and Pacific Island development and futures need to continue to be forged in their own hybridised ways, which include the incorporation of continuously evolving understandings of culture within the context of an increasingly globalised and interconnected world.

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Appendix One: Interview Questions/Topics

Interviews in Sapapali'i

1. Previous Experience of Natural Disasters

- a) How were natural disasters traditionally prepared for? Whose role was it to undertake these tasks?
- b) Is this traditional knowledge still used today? If so, how? If not, why not?
- c) Who takes responsibility for disaster preparation in your community?
- d) Who takes responsibility for disaster preparation in your home?
- e) Are people in the village taught what to do in a disaster? Who teaches them? Do you know what sorts of things they are taught?
- f) What are the most important things to do when you hear a disaster such as a cyclone is coming?
- g) Can you share with me any past experiences of natural disasters in your community?
 - * What sort of disaster was it?
 - * Did you have warning that it was coming? If so, who gave you this warning? What preparations were made? Who did what?
 - * How long did the disaster last for?
 - * What impacts did the disaster have on your community? (damage – buildings, crops, stores, injury, sanitation etc.)
 - * Whose responsibility was it to fix this damage? What tasks did women perform? What tasks did men do? Were these their normal tasks?
 - * Did you receive help from outside of your village? (if yes) Who provided this and what was it? (e.g. remittances from overseas, govt aid etc.)
 - * Who suffered the most damage? Why?
 - * How long did you feel the impacts of this disaster for? Which impacts lasted the longest?

* What lessons did you learn from the disaster? What things do you now do differently?

2. Contemporary Resource management

At the start of this section participants will be asked to sketch a map of their area and mark on it natural/manufactured resources. They will be asked to indicate (who has access to these resources, who has responsibility for it, who controls it, who provides the labour, who processes it (and where), what resources are used for (and by whom), an indication of how much time is spent on tasks).

Natural Resources (fishing, planting/tending/harvesting crops, fresh water, livestock etc.) (this list will be made up with the resources mapped by the participant in the previous exercise)

Manufactured Resources (vehicles, boats, power generator etc.) (this list will be made up with the resources mapped by the participant in the previous exercise)

- a) What resources do women have control over?
- b) What resources do men have control over?
- c) What resources do you think are most important to women and which are most important to men?

*** The following questions will be asked for each resource**

- d) Who has access to this resource?
- e) How is access to this resource managed?
- f) Is this resource individually or communally owned?
- g) Who provides labour for this resource?
- h) How is this resource used?
 - * Whose responsibility is these different uses?
- i) How frequently do you use this resource (which ones are part of everyday life and which are only used seasonally or for special occasions)?
- j) What challenges (if any) do you have in making sure that there is enough of this resource for your use?
 - * How do you try and reduce these challenges? Are they successful?
- k) Where is this resource stored? Whose responsibility if this? How is it stored?

l) Have there been changes over time in the ways in which this resource has been grown/harvested? If so, what have these changes been and who have they impacted on? How?

m) What measures are taken to reduce damage to this resource by storms/floods/drought/cyclones etc?

n) If a storm warning is received what is done to protect this resource? Who receives the warning? Who is involved in making the preparations? How successful are they?

o) Which of these events is the greatest risk to this resource?

p) Has the availability of this resource been threatened by anything else (e.g. overuse, pollution, deforestation etc.)

q) What has been done to reduce these threats? How successful are they?

3. Future Concerns

a) Have you heard of climate change/global warming?

* If you have, what does it mean to you?

* Where did you hear about climate change?

* What impact do you think it have on your life?

* Is your community doing things to prepare for the impacts that climate change may have on your community?

b) If the weather becomes more unstable with more storms/cyclones – how will this impact on your community?

c) What resources do you think are most likely to be threatened in the future? What will they be threatened by?

d) Whose responsibility should it be to make sure that resources continue to be available in your community?

e) What role should the Samoan government play in addressing any environmental/resource issues in the future?

Interviews undertaken in Apia

Red Cross

1. Can you briefly outline the role that Red Cross plays in Samoa?
2. Has this role/focus changed over time?
3. What are some of the key concerns/reasons/issues that the Red Cross is currently focusing on? Can you describe some of these in more detail?
4. Do the needs/priorities vary across Samoa? Can you describe some of these variations and why you think they exist?
5. I understand that you are currently in the middle of a natural disasters/hazards education programme? Can you briefly describe this project (why was it formed? What do you do? Who is involved (who do they speak to in the villages)? etc.)
6. How did you decide what approaches to take for education project (were local communities consulted during this process?)?
7. What role does traditional knowledge of disasters and coping strategies play in current disaster management/education?
8. Does any of your work focus on broader issues of environmental/resource sustainability? If so, can you briefly describe some of these projects (why they were formed? What they do? Who is involved? etc.)
9. What do you think are the most serious impacts of disasters on villages in Samoa (i.e. cyclones)?
10. Is the Red Cross involved in work around climate change? Can you describe some of this work?
11. How serious do you perceive the threat of climate change to be for Samoa?

Women in Business Development (WIBD)

1. Can you briefly outline what Women in Business is, how it came about and the role that it plays in Samoa?
2. What are some of the current priorities/key concerns/issues that WIB is focusing on?
3. Can you describe some of your current projects that you are overseeing?
4. Are the concerns of women in Apia, different to those in more remote villages? If so, in what ways?
5. Are any of the WIB initiatives linked to natural disasters/hazards? (ie. Alternative sources of income to mitigate impacts of disasters etc.) If so, can you briefly describe some of these initiatives (why they were formed? What they do? Who is involved? Etc.)
6. Are any of the WIB initiatives linked to environmental/resource sustainability? If so, can you briefly describe some of these initiatives (why they were formed? What they do? Who is involved? Etc.)
7. What impacts do disasters (ie. cyclones) have on the economic situation for women in Samoa?
8. Do you think that their situation is different from that of men? If so, how?
9. What do you think are some of the biggest challenges facing women in Samoa? How do you think these can be overcome (or at least addressed)?

South Pacific Regional Environment Programme (SPREP)

1. Could you briefly outline the role that SPREP (Samoa) plays in disaster management and climate change?
2. What are the main risks to address with regards to disasters in Samoa? How are you addressing these?
3. What SPREP work on disasters takes place at a local/village level in Samoa? Can you explain this? Who do you consult with in the villages?
4. What do you think are people's attitudes towards disaster risk in Samoa?
5. What are the main risks to address with regards to climate change in Samoa? How are you addressing these?
6. What SPREP work on climate change takes place at a local/village level in Samoa? Can you explain this? Who do you consult with in the villages?
7. What do you think are people's understandings of climate change and its impacts in Samoa?
8. Are there regional differences in disaster/climate change risk in Samoa? If so, can you explain?
9. How does environmental sustainability fit into climate change/disaster work in Samoa?
10. What role does indigenous knowledge play in the work that SPREP does?
11. Does the issue of gender and gendered differences in disaster/climate change impacts get addressed at all by SPREP?
12. Can you briefly outline some of the work that you do around climate change education, training, awareness? What are some of the key messages that you are putting across?
13. What are your thoughts on future development directions for Samoa?

Ministry of Natural Resources, Environment and Meteorology (MNRE)

1. Could you briefly outline the work that MNRE does on Disaster Management in Samoa? What do you include as 'disasters'?
2. Has the approach to disaster management in Samoa changed over time? If so, how?
3. I understand that there is a cross-government disaster team lead by the PM. Can you briefly outline the role of this team and how it came about?
4. What are the current priorities for your disaster management work?
5. What are the biggest challenges for hazard management in Samoa?
6. What role does indigenous knowledge of disaster management play in your work? Do you think that it is important to retain this knowledge?
7. Do you undertake community consultation/education? If yes, can you briefly explain this work and the key messages that you put across.
8. When you are working at the community/village level, who do you consult with? Why?
9. What do you think is the current level of understanding of disaster awareness at the village level in Samoa?
10. What are the most serious impacts of disasters in Samoa?
11. Do you also link your work in with climate change? Please explain.
12. How do you see the relationship between disaster management and environmental sustainability?
13. How do you see the relationship between disaster management and broader development issues in Samoa?
14. Does any of your work take into account gendered differences in disaster experiences/management? Please explain why/why not and how you approach gender in your work.
15. What do you think are the biggest threats to environmental sustainability in Samoa?

Appendix Two: Interview Consent Form

Beth Watson
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 (03) 3518 708 (home)

CONSENT FORM

“Negotiating Development: Gender, disasters and environmental management in a Samoan community” [working title – may change].

I have been presented with a copy of the information sheet for the above project. I have read this and understand the description of the project, my rights as a participant including my right to confidentiality. I thereby agree to participate as a subject in this research project. I understand that I am free to withdraw from the project at any time and that my anonymity will be preserved at all times. I also understand that I am free to withdraw my interview data at any stage in the research process. In signing this I consent to the use of material in the interview transcript in a Masters thesis but that I will be offered the opportunity to check the transcript of the interview before this occurs. I also understand that the research material may be used for future research or academic publication.

Name (Print):

Signature:

Date:

Appendix Three: Research Information Sheet

Negotiating Development: Gender, disasters and environmental management in a Samoan community [a working title – may change]

Interview Information Sheet

This research project aims to explore local environmental and hazard management in Samoa. It seeks to understand the role of traditional indigenous knowledge; the key challenges; the key challenges facing the community; and the gendered nature of environmental management in the village. By focusing on a local community I hope to explore the ways in which national/international development processes impact on small communities and the potential for the reworking of 'western' conceptualisations of 'development' including the concepts of 'resilience' and 'vulnerability'.

This project is being carried out for my Master of Arts thesis in the Department of Geography at the University of Canterbury, Christchurch, New Zealand. Research is being undertaken by Beth Watson under the supervision of Dr Julie Cupples. This project has been approved by the University of Canterbury Human Ethics Committee.

If you agree to participate you will be asked to take part in a semi-structured interview that will last approximately 1.5 hours. Questions to be discussed will be provided before the interview and you will have an opportunity to provide input into the questions that will be asked before the interview takes place. The interview will be in a setting of your choice. Interviews can be undertaken in Samoan or English depending on your preference and a local translator will be present for interviews undertaken in Samoan. An additional conversation may be necessary after the interview to follow up and clarify particular issues. Interviews will be tape recorded and the transcripts of the interviews will be used as research data for the thesis. You will have the opportunity to read the transcript and make any needed changes before I leave for New Zealand.

As a research participant you have the right to withdraw at any stage in the research process. Research is strictly confidential and all names and identifying information/locations will be changed. This will include names of children, extended family members, teachers and friends. Data will be securely stored and will only be accessed by me and my supervisor, Dr Julie Cupples.

The research material will be used predominantly for my Masters thesis. However, the research material will be kept and may be used for an academic paper based on the thesis or for future research.

If you have any further questions or queries about the research or your role as a participant one I have returned to New Zealand feel free to contact me, Beth Watson, by mail:

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